

ILLINOIS POLLUTION CONTROL BOARD  
September 15, 1994

IN THE MATTER OF: )  
 )  
REGULATION OF LANDSCAPE ) R93-29  
WASTE COMPOST FACILITIES ) (Rulemaking)  
35 ILL. ADM. CODE 830-832 )

Proposed Rule. Second Notice.

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

On November 30, 1993, the Illinois Environmental Protection Agency (Agency) filed with the Board a proposal for regulating landscape waste compost facilities in Illinois. The Agency filed its proposal pursuant to Section 22.33 of the Environmental Protection Act (Act) (415 ILCS 5/1 et seq.), which directs the Agency to develop and recommend to the Board by January 1, 1994 regulations establishing performance standards for landscape waste compost facilities, and testing procedures and standards for end-product compost produced by such facilities. Section 22.33 of the Act requires the Board to adopt such standards by December 1, 1994.

On June 30, 1994 the Board adopted for first notice an opinion and order containing proposed regulations for landscape waste compost facilities, and testing procedures and standards for end-product compost produced by such facilities. In accordance with Section 5.01 of the Illinois Administrative Procedure Act and Section 102.342 of the Board's procedural rules, a forty-five day public comment period commenced when the proposed regulations were published in the Illinois Register on July 15, 1994. Today, the Board acts to send the proposed rules to second notice.

REGULATORY FRAMEWORK

The original proposal was developed by the Agency with the assistance of the Department of Energy and Natural Resources (DENR) and a compost advisory committee composed of a balanced representation of interest groups, which was appointed by the Agency and DENR, and titled the Compost Quality Standards Technical Advisory Committee (CQSTAC). The first part of the three part regulatory proposal ultimately submitted by the Agency was developed based on input from all three bodies. That part, Part 830, contains the location and performance standards for compost facilities and the quality standards for end-product compost. The second and third parts proposed by the Agency, Parts 831 and 832, are based on its own experience and are intended to codify permitting procedures and requirements already in place for these types of facilities.

The first notice proposal adopted by the Board was based for the most part on the proposal developed by the Agency, DENR and COSTAC. Parts 831 and 832 were not changed. The most significant change was proposed at Part 830. The Board proposed to expand the applicability of the location and performance standards. The location standards at Section 830.203 were proposed as applicable to all but garden compost operations and permit-exempt facilities composting less than 100 cubic yards of material in a year. The performance standards contained in Sections 830.204 through 830.213 were proposed as applicable to those permit-exempt facilities composting 100 cubic yards or more of material in a year and distributing it off-site, as well as being applicable to permitted facilities regardless of size. The Agency had proposed that these location and more stringent performance standards be applicable only to permitted facilities.

#### Hearing During First Notice Period

At the April 15, 1994 hearing in Chicago, Mr. David Albers questioned whether the statutory setback provisions should not be applicable to commercial facilities as well as residences, and another member of the audience raised as an issue the possibility that certain air-borne contaminants might be associated with the landscape waste composting operations. At that hearing, however, the participants were only prepared to raise these issues, not to go forward that day or at the upcoming hearing scheduled in Springfield. For that reason and to solicit and hear testimony concerning the rules proposed for first notice, the Board scheduled a hearing during first notice which was held on August 3, 1994 in Chicago. Testimony was given by the Agency, the proponent of the original proposal, Mr. Jerome Joyce, Mr. Mark Heffernan, Ms. Lisa Disbrow of Waste Management Inc., and Mr. David Albers.

Since that hearing, written public comments have been received from the following persons, in addition to those previously submitted after the first two public hearings and before the August 3rd hearing in this matter. The most recent comments were submitted by:

- #7 Mr. Thomas Augustine
- #8 Mr. Mark Heffernan
- #9 Dr. Michael A. Cole
- #10 Illinois Environmental Protection Agency
- #11 Browning Ferris Industries
- #12 Waste Management Inc.
- #13 Citizens for a Better Environment
- #14 City of Chicago

The Board has considered all of the testimony given at the most recent hearing, as well as the previous two, and all of the

public comments received to date in making its decisions on this proposal.

#### ISSUES RAISED DURING FIRST NOTICE

Four issues were raised during first notice. The first is whether the applicability scheme proposed at first notice should be modified, and if so, how. The second issue centers on how best to control odor and other nuisances commonly occurring at landscape waste compost facilities. When the origin of odor was discussed, the quantity of methane emissions from open landscape waste composting operations was also questioned and scrutinized. The third issue is whether the requirements pertaining to inorganic constituents in the end-product are correct. The final issue, and the only one new since the adoption of first notice, involves possible air-borne contaminants from these operations, particularly *Aspergillus* fungi. Each of these four issues, as well as related topics, are discussed in greater detail below.

#### Applicability Based Upon Facility Class

The Board proposed to make these regulations applicable to landscape compost facilities to the maximum extent possible given the applicability and permitting constraints of Sections 21(q), 22.33, and 39(m) of the Act based upon the Board's belief that permit-exempt facilities have the same potential to impact groundwater and surrounding properties as permitted facilities. The applicability scheme proposed by the Board at first notice was dependent in part upon a facility's size. The Board proposed a 100 cubic yard cut-off for facilities composting landscape waste generated only on-site, acknowledging that number was chosen because the Agency had considered this size sufficiently significant to warrant annual reporting. (First Notice Opinion at 9.) The Agency had declined the Board's previous invitation at hearing to propose an appropriate volumetric cut-off, so at first notice the Board specifically solicited comments about the appropriateness of the 100 cubic yard volumetric cut-off and the applicability scheme in general.

The only comments received thereafter concerning this issue were those from the Agency. Based upon those and the Agency's testimony at hearing, coupled with testimony from others concerning the environmental nuisances most threatened by landscape waste compost facilities, the Board has redefined the applicability scheme proposed at first notice.

In its public comment, the Agency requested clarification by the Board of the applicability scheme proposed at first notice. The Agency found the "six" classes of facilities defined by the Board to be confusing. (P.C.#10 at p. 11.) Actually, the Board only defined five classes of facilities, but two of these were further subdivided into two categories depending upon their size.

The Agency found confusing the phraseology of Section 830.201: Scope and Applicability. The Agency pointed out that some classes were "exempted" from regulations, while others were "subjected" to regulations. Accordingly, the Board has restructured this section using a uniform approach whereby the facility's type, as defined at Section 830.102, will dictate which performance standards are applicable.

The major, and more general, concern held by the Agency, however, involves the difficulty in making the location and performance standards applicable to permit-exempt facilities. Absent the permitting mechanism, the Agency questions how it is to authorize alternatives from various requirements set forth in the regulations, and how facilities denied such alternatives are to appeal the same. The Agency's first example questions how the Agency is to impose additional performance standards if the permit-exempt facility is located near off-site residences and there is the possibility of a need to minimize incompatibility with character of the surrounding area. (See proposed Section 830.203(c).) The Agency questions how and who would make such a determination. The other examples given by the Agency question how alternative additives are to be authorized by the Agency pursuant to Section 830.205(a)(1)(H), and if such an additive could cause the need to monitor pathogens, how would the Agency so require absent a permit. (P.C.#10, pp. 12-13.)

At hearing, an extensive discussion took place between the Agency and the Board concerning whether there is an appropriate size cut-off for applying the location and more stringent performance standards. As already explained at first notice the Board proposed a cut-off of 100 cubic yards of composted material per year, the same size cut-off proposed by the Agency for requiring annual reporting by permit-exempt facilities. The Board used this size because no other cut-off was discernable from the record. The Board thought perhaps an appropriate size could be ascertained, but the original list of landscape waste facilities in Illinois was deemed unreliable. (First Notice Opinion at 9.) Therefore, the Board requested, and the Agency provided, a corrected table. The subsequent discussion about the new table did not elicit any discernable cut-off, although it became clear that the Agency meant the size of a facility to be based upon the amount of composting material on-site at any one time, as opposed to its annual through-put. Accordingly, the size cut-off for requiring permit-exempt facilities to submit annual reports has been so amended at Section 830.202(i).

The Board originally proposed to subject permit-exempt facilities to the location and more stringent performance standards because a facility's statutorily prescribed permitting status is not premised on the threat it poses to the environment. A permit-exempt facility can pose the same threats to the environment as a facility required under the Act to have a

permit. Ultimately, the Board and the Agency agree that threats to the environment associated with these types of facilities are not dependent on their permit status. In pointing out that not all threats to the environment are based upon a facility's size, the Agency testified that some threats, e.g., those to groundwater and underlying soils, are dependent on the operational practices of the facility. (Tr.3 at 57.) Accordingly, the Board has deleted the size distinction. The location standards at Section 830.203, which parallel those set forth at Section 39(m) of the Act, are now applicable to permit-exempt and permitted facilities alike, regardless of size.

We have also reduced the applicability of performance standards. Permit-exempt facilities will only be subject to the minimum performance standards set forth in Section 830.202. Along with the deletion of the size cut-off, we have deleted the requirement that some permit-exempt facilities be subject to the more stringent performance standards set forth at Sections 830.204 et seq. We are persuaded by the Agency's comment that, in the absence of a permit, the route for granting authorization or appealing denial of the same is difficult. However, to insure that permit-exempt facilities do not pose unnecessary threats to the environment, the minimum performance standards have been expanded.

The critical elements of the additional, more stringent performance standards have been grafted into Section 830.202. Added are the requirements that all facilities subject to performance standards: (1) take specific measures to control for litter and vectors at subparagraph (c); (2) have and adhere to an odor management plan at subparagraphs (c) and (e); and (3) inform the public about how to register complaints and forward information about such complaints to the Agency on an expeditious schedule at subparagraphs (i) and (m). The last requirements are discussed in more detail below wherein odor problems and control of the same are addressed. Finally, as originally proposed by the Agency, the minimum performance standards remain applicable to permitted facilities and permit-exempt facilities, including on-farm landscape waste compost facilities.

#### Control of Odor and Related Issues

At the April 15th hearing, Mr. David Albers expressed concern that the set back requirements established by statute do not protect neighbors from the odors emanating from landscape waste compost operations, particularly since the set back requirements are not applicable to commercial neighbors. At the August 3rd hearing, he elaborated upon this and the enforcement difficulties associated with odor complaints. In the context of the odor discussion, the question about whether monitoring for specified oxygen levels should be required was revisited. Prior to the first hearing, the Board had asked the Agency whether such

a requirement would be an effective means of averting or, at least, reducing conditions giving rise to odor episodes; the same issue was raised at the third hearing. Finally, at the August 3rd hearing, methane production at landscape waste compost facilities was discussed. Public comments responding to each of these topics were submitted after that last hearing.

Odor and Nuisance Controls. The testimony given by Mr. Albers did much to focus the participants on perhaps the most difficult issue associated with landscape waste compost facilities: the odor generated by such composting. First, Mr. Albers testified about the obnoxious odors experienced on occasion by persons and establishments neighboring compost facilities. (Tr.1 at 53-56.) At the August hearing, he reemphasized that the setback provisions are inadequate and testified further about the inadequacies of the proposed regulations for protecting nearby people from odors. While he recognized that the setback provisions proposed mirrored those statutorily established, he requested equal relief for all affected. Mr. Albers acknowledged that the setback requirements in and of themselves do not solve the problem. The real problem is that odor knows no fixed distance. Thus, the solution lies in regulating the operation of this type of facility.

In response to Mr. Albers' testimony, the Agency pointed out that the proposed regulations contain numerous provisions intended to protect residents from odor nuisances. The Agency cited the location standards at Section 830.203(c); the operating standards at Section 830.205(c) requiring that aerobic composting be employed; the operating plan at Section 830.206(g) requiring details about the management of odorous loads; and the recordkeeping requirements in Section 830.211(b)(7) through (b)(9) requiring the recording of all odor complaints received and corrective actions taken. (P.C.#10 at 7.)

Much of Mr. Albers' testimony on August 3rd attested to the difficulties encountered in obtaining enforcement, informally and formally, for odor violations. (Tr.3 at 194-200.) He also suggested at least seven requirements as possible aids to the odor problems and enforcement difficulties they pose. He suggested that perhaps berms could be required to catch debris and attenuate odors; a specific carbon to nitrogen ratio and bulking agent inventory could be mandated; use of bulking materials atop recently turned windrows to act as a biofilter could be required; adjacent property owners could be notified of pending enforcement action by the Agency as well as information about available enforcement mechanisms; operating hours could be limited to eliminate actions which may create odors during night hours; adjacent property owners be notified of pending permit renewals; and finally that the ten year term of a permit be reduced. (Tr.3 at 200-210.)

The Agency responded to most of Mr. Albers' suggestions in its public comment. For example, the Agency explained that the effectiveness of a berm for nuisance control is uncertain, and that defining operating hours may have the opposite effect than intended--the operator may be constrained from operating machinery at the very time needed to correct odor causing situations. (P.C.#10 at 7-9.) The Agency further explained its opinion that some of the suggestions made by Mr. Albers are already adequately addressed in the regulations. For example, the compost recipe at proposed Section 830.206(f) and (g) requires sufficient bulking agent, additive or odor control agents be readily available, thus addressing the Mr. Albers' suggestions that bulking agent be applied immediately after windrow turning, and that there be a mandatory bulking agent inventory and carbon to nitrogen ratio.

Curiously, each time the Agency cited already proposed regulations as addressing Mr. Albers' concerns, those regulations were only proposed to apply to permitted facilities. To insure that odor control is optimized at all facilities subject to performance standards, the Board has relocated the most critical of odor control requirements from Section 830.205 to Section 830.202, specifically subparagraph (e). As part of the minimum performance standards, neighbors of on-site commercial facilities<sup>1</sup>, as well as those neighboring permitted facilities, will be afforded protection because these facilities' operators will have to devise and adhere to odor nuisance control plans. Since objective standards for odor control cannot be adopted for the reasons described below, the Board finds that requiring management plans with the detail originally proposed only for permitted facilities will minimize the subjectivity of this regulatory approach at all landscape composting operations subject to performance standards.

Finally, Mr. Albers sought to alleviate the difficulty encountered by neighbors seeking relief from possible odor violations. He described the difficulty in learning about and maintaining odor logs, and his belief that government should be of more assistance, e.g., via permit renewal and enforcement notification, posting of signs, and shorter permit terms. At hearing, the Agency addressed these concerns when responding to a Board question about the possibility of a self-reporting mechanism. The Agency suggested that the facilities might be required to notify the Agency when they are receiving complaints. (Tr.3 at 235.)

---

<sup>1</sup> As discussed at page 17 of this Opinion, "on-site/off-site facility" has been renamed "on-site commercial facility".

Mr. Albers' experience and suggestions lead the Board to conclude that the solution to nuisance complaints involving these facilities is accountability, as well as the adoption of operating requirements sufficiently specific to reduce the incidents of nuisance and enable efficient enforcement. Accordingly, the Board proposes new regulations which require these facilities to post and maintain legible signs notifying the public that complaints can be made to the facilities or the Agency and which provide their respective telephone numbers. Furthermore, the facilities will be required to report every odor complaint received to the Agency within 24 hours, and report the date, time, and nature of action taken in response to such complaint to the Agency within seven days of receiving the complaint. (See proposed Section 830.202(i) and (m).) This way, the Agency will have a current record documenting which facilities, permitted or permit-exempt, are experiencing odor problems. Given this information, the Agency or its delegated authority can promptly investigate the complaints as warranted based on the frequency and nature of the complaints.

Finally, the term of the operating permit will be five years, as opposed to the ten years proposed by the Agency. (See Section 832.110.) Recognizing that the Agency can of course attempt to modify or cancel a facility's permit in conjunction with its enforcement powers under the Act, by reducing by half the term of this type of permit, these facilities will be more frequently subject to the permitting process. This will allow the Agency to review the facilities operating record and make changes necessary to improve its operations in the context of odor and other nuisance complaints. This more frequent scrutiny will also serve to keep the facility current with changes and improvements developed in this field.

Monitoring Oxygen Levels. Prior to the first hearing in this matter, the Board pre-filed a series of questions for the Agency to address at hearing. Specifically, the Board asked if the regulations should prescribe a minimum oxygen content limit. The Agency responded that based on discussions with CQSTAC, compliance with a set limit for oxygen would be technically infeasible, and therefore, should not be adopted. (Tr.1 at 103-106.)

At the August 3rd hearing, this issue was raised again. Mr. Mark Heffernan, president of Convergent Biomass Technologies of Round Lake, Illinois testified concerning the anaerobic conditions inherent in composting operations. Mr. Heffernan's company takes organic waste streams and decomposes them in a totally enclosed and anaerobic environment. The product gases collected have energy value. (Tr.3 at 77 and 157.) Mr. Heffernan testified that the landscape waste composting facilities "go anaerobic" in a matter of hours due to oxygen demands. He testified that you cannot maintain aerobic



conditions over the course of sufficient time necessary for the decomposition to occur. He also said to do otherwise, even if possible, would economically destroy this type of composting. (Tr.3 at 98-99.) When it was suggested that periodic testing for oxygen levels could determine when a "crisis" is coming, Mr. Heffernan responded that such "crisis" would be found every day, agreeing that "it is next to impossible to maintain aerobic conditions." (Tr.3 at 102.)

Based on the record at first notice, the Board did not propose oxygen limits or monitoring requirements. Mr. Heffernan's testimony and answers to questions asked of him concerning this issue did nothing to change that decision. The record still does not support such requirements. As already stated, the solution to odor problems associated with the anaerobic conditions experienced at this type of facility are better addressed by regulating their operations and accountability to the Agency and their neighbors for odor nuisances.

Methane production. Mr. Heffernan's testimony also concerned the production of methane gas at composting facilities. Based on his experience and general knowledge he testified that the methane content of gas from standard anaerobic decomposition processes is 50 or 60 percent. (Tr.3 at 106-107.) Upon further questioning, he agreed that this ratio of methane to carbon dioxide is not necessarily present in an open windrow pile because there is portion of the pile which is aerobic. (Tr.3 at 109.)

Dr. Michael Cole, an associate professor of soil microbiology at the University of Illinois at Urbana-Champaign who is also a member of the CQSTAC, submitted comments, which address the issues of methane generation during landscape waste composting and the proposed standards for metal content of landscape waste compost. Regarding the issue of methane generation, Dr. Cole notes that Mr. Heffernan's statement that methane constitutes 50 percent of the gases released during composting is based on the assumption that the composting process is predominantly anaerobic. Dr. Cole asserts that in reality even though measured oxygen content of a compost pile may be low, conditions are not necessarily sufficiently anaerobic to permit methane production. Dr. Cole notes that systems that produce approximately 50 percent methane and 50 percent carbon dioxide are mostly systems that are sealed to exclude air. However, a compost windrow is not a sealed system and permits the entry of air. Therefore, methane production is very likely to be limited to micro-environments and would not be a property of the entire windrow. Dr. Cole notes that even if methane is produced, there is a high probability that methane will be oxidized to carbon dioxide. (P.C.#9 at 1.)

Dr. Cole contends that even if Mr. Heffernan's remarks concerning the generation of methane during composting were true, the amount of methane generated would be very small in relation to other naturally-occurring and largely uncontrolled sources. Dr. Cole has presented some rough calculations to support his views. These calculations show that the maximum methane generated from yard waste in Illinois under Mr. Heffernan's assumptions can be no more than 0.06 to 0.09 percent<sup>2</sup> of total methane generated globally. Dr. Cole has also presented calculations that utilize more realistic methane generation data for yard waste compost operations that suggest that methane generation from yard waste in Illinois would be in the range of 0.006 to 0.01 percent<sup>3</sup>. Based on these estimates, Dr. Cole believes that there is no useful purpose to be served by requiring operators to minimize methane production. Further, Dr. Cole notes that turning composting material on a frequent basis is not practical since: 1) it will interfere with the composting process due to heat and water loss; 2) it is not economically feasible because of high operating costs; and 3) turning would not diminish anaerobic microsites which occur in the core of small compost particles, and therefore would not diminish the potential for methane production. (P.C.#9 at 2-3.)

The Board concludes that methane produced by open landscape waste composting does not warrant regulation in this proceeding.

#### Toxic Metal Standards

The limits for inorganic constituents found in this type of compost are set forth in Table A of Part 830. As proposed at first notice, testing for these constituents, eight heavy metals, was specifically not required. Based on the testimony presented at the hearing during first notice and comments received thereafter, the Board proposes to require testing for seven of these constituents (molybdenum having been deleted<sup>4</sup>) on a routine basis by permitted facilities only. The levels proposed for these constituents remain the same as proposed at first notice.

The limits proposed by the Agency were derived from the Alternate Pollution Limits established by U.S. EPA for beneficial

---

<sup>2</sup>The estimate is based on 2 million tons of carbon being converted to methane, as used in Dr. Cole's comments.

<sup>3</sup>The estimate is based on 2 million tons of carbon being converted to methane, and not the incorrect value of 20 million tons used in Dr. Cole's comments.

<sup>4</sup>Molybdenum is deleted because it is no longer regulated at 40 CFR 503. (P.C.#10 at 1.)

use of sludge, and are commonly referred to as the "503 regulations" because they appear at 40 CFR 503. Initially the Board questioned whether these levels would be sufficient to protect against groundwater degradation. At the April 22nd hearing, Ms. Joanna Hoelscher of Citizens for a Better Environment (CBE) likewise questioned whether the levels set would be protective of human health and the environment. (Tr. 2 at 84-87.)

On behalf of CBE, Ms. Hoelscher endorses composting, and landscape waste composting, as an important source reduction and recycling strategy. (Tr.2 at 79.) However, CBE cautions that if the compostable material becomes contaminated with toxic metals present in the waste stream, the end-product is less useful and may pose a long term threat to the soils. (Tr.2 at 59-60.) CBE points out the differences in the proposed heavy metals limitations for landscape waste end-product and those proposed for finished compost in European countries, Canada, and other states. (Tr.2 at 66.) Advocating that the Board adopt more stringent standards than the 503 levels proposed, CBE pointed out that to do so would not negatively impact the landscape waste composting operations in Illinois because finished compost from yard waste generally does not contain high levels of toxic metals. (Tr.2 at 72.) CBE is most concerned that if the proposed levels are adopted in this proceeding that they be reexamined at the time other compost waste streams are regulated, most specifically, mixed municipal waste. (Tr.2 at 109.) In fact, in response to her final question at hearing, Ms. Hoelscher stated that she did not object to the limits proposed for the metals in the context of landscape waste. (Tr.2 at 122.)

Since that hearing, Ms. Hoelscher has submitted a public comment urging the Board to review again CBE's arguments and to consider the information contained in a memorandum authored by Dr. Michael Cole, dated August 10, 1994. CBE also bases much of its comments on the information contained in Public Comment #9 submitted by Dr. Cole. Furthermore, CBE urges the Board to consider standards used by other states and countries submitted by CBE and the Agency. CBE expresses its preference for "a set of numbers" that are close to the more conservative Canadian and European standards. Finally, CBE states its belief that compost which contains heavy metals at concentrations higher than generally found in the soil should not be applied. (P.C. #13.)

At the August 3rd hearing, Mr. Heffernan testified that the proposed standards were inappropriate because they either allow for the contamination of this waste stream, or the public would perceive landscape waste to be comparable to that of composted sludge, rendering the end-product compost derived from landscape waste as difficult to market as composted sludge. (Tr. 3 at 78-79.) Mr. Heffernan testified that he did not believe that the level of metals in landscape waste derived compost come "anywhere

near" the proposed numbers. He also testified that he is concerned about bioaccumulation of metals in the soils. (Tr. 3 at pp. 79-81.)

At hearing, the Agency explained that a maximum level for these metals is necessary at this time despite the fact that the end-product compost derived from landscape waste should not approach these numbers. The Agency testified that these maximum levels ensure that the compost is safe for distribution (Tr.3 at 142 and 144.) However, if a landscape waste facility's end-product did approach these levels, the Agency would consider that the waste stream had been adulterated either by a "source" of landscape waste or at the facility. (Tr.3 at 120 and 143-144.) The Agency also testified that, pursuant to the proposed definition of additive, only those additives which replace something that is needed to promote composting will be allowed. (Tr.3 at 144-145.) Thus, the Agency will have the authority to restrict the type and amount of additives to the extent necessary to insure that their use does not adulterate this waste stream.

The reason the Agency wants the maximum levels at this time is to establish a regulatory scheme driven by end-product standards, as opposed to a scheme based upon classification of the end-product dependent upon where the composted material originates and limitations on its use. (Tr. 3 at 139-140.) On the issue of testing for these constituents, the Agency believes that there are enough controls at the "gate" which will effectively screen the landscape waste received. In conclusion, the Agency argues that the standards should not be based on "market considerations" as urged by Mr. Heffernan and reiterates that because of the sparse database on these compost operations, the only scientifically defensible limits are the 503 levels. The Agency acknowledged that the appropriate toxic metal standards for the end-product derived from this waste stream, as well as the organic and mixed municipal waste streams, remains open to debate. (P.C. #10 at p.4.)

CBE, Mr.Heffernan, and the Agency cite Dr. Cole as their authority why the Board should and should not adopt more stringent levels for toxic metals in the compost derived from landscape waste. We have reviewed both Dr. Cole's public comment and his memorandum of August 10, 1994 submitted by Mr. Heffernan and CBE.

Regarding the standards for metal content of landscape waste, Dr. Cole recommends that the Board retain the proposed standards which are based the 503 regulations for the time being, but suggests that more appropriate standards be implemented in the future as a better database of metal content of Illinois compost is developed. In this regard, Dr. Cole notes that it is possible to use compost quality data to estimate values at which 95 percent, 99 percent, or 99.9 percent of the compost produced

in Illinois would fall within specified values. To illustrate how occurrence values may be used as indicators of compost quality, Dr. Cole has calculated the confidence intervals<sup>5</sup> at 95 percent, 99 percent and 99.9 percent for concentration levels of seven metals<sup>6</sup> using data from a DENR survey<sup>7</sup>. Dr. Cole notes that if the metal concentrations at a confidence level of 99.9 percent are chosen as indicators of compost quality, nearly all yard waste produced in Illinois would meet the 99.9 percent metal concentrations, *i.e.*, relatively few operators would ever produce an unacceptable batch. Further, the metal concentrations under 99.9 percent confidence level are significantly lower than the proposed standards, which are based on the 503 regulations. However, Dr. Cole admits that the calculated values are only approximations since they are based on data from only a few sites sampled in the DENR study.

Dr. Cole expresses concern that there may be no safeguards to preclude production of heavily contaminated compost because there is no regulatory requirement for routine analysis for metals. Mr. Heffernan also is concerned about this waste stream being adulterated. The rules do, however, at Section 830.202(a) prohibit domestic sewage, sewage sludge or septage in compost material. This prohibition and the constraint on bulking agents and additives found at Section 830.202(b), act as safeguards against contamination by toxic metals of the end-product derived from this particular waste stream.

Nevertheless, based upon the comments received and the testimony given, the Board is proposing that these constituents be tested on the same routine basis as the other parameters set forth in Section 830.503(a)-(d). This testing requirement is applicable only to permitted facilities because they are the only class which can receive landscape waste from off-site. Therefore, this class is most susceptible to adulteration of the waste stream. The Board notes that such testing should enlarge the very limited data base currently available concerning the level of toxic metals in landscape waste derived compost. Whether that data is developed in accordance with the recommendations suggested by the Agency in its public comments

---

<sup>5</sup>For example, a 95 percent confidence interval means that we are 95 percent sure that the average concentration of a particular metal in finished landscape waste compost produced at any Illinois facility would fall within the calculated range

<sup>6</sup>Cadmium, chromium, copper, lead, mercury, nickel and zinc.

<sup>7</sup>"Selected Metal and Pesticide Content of Raw and Mature Compost Samples from Eleven Illinois Facilities." ILENR/RR-92/09, 1992.

will depend on how the information generated is used by the Agency, DENR, and other interested parties.

Finally, the Board notes that the Agency has testified that of the six states which currently have landscape waste composting standards, only California currently has metal levels applicable to landscape waste derived compost. (Tr.3 at 155.) The Board believes that with the addition of the testing requirement there are sufficient safeguards in place to keep the end-product derived from landscape waste safe for use in Illinois.

### Air-borne Health Risks

At the August 3, 1994 hearing, Mr. David Albers raised the issue of potential health impacts from airborne pathogens found at composting facilities, such as mold and fungi. (Tr.3 at 211.) Mr. Albers introduced into the record a study entitled "General Background Package, San Jose, California," performed by Almaden Health Surveys and Testing in March 1994 for an organization called Citizens United for Responsible Environmentalism (CURE). (Tr.3 at 218-218.) This study concludes that *Aspergillus* fungi and other pathogens caused individuals living near a compost facility to have higher anti-body titers and more allergy symptoms than found in a control group.

In its public comment, the Agency addressed the issue of airborne pathogens. The Agency reviewed several technical documents published by U.S.EPA and other states. This review of the literature led the Agency to conclude that properly operated composting facilities should not present a health risk from airborne fungal spores. (P.C.#10 at 7.) The Agency also points out that the CURE study introduced by Mr. Albers was an interim report, and that it was based on one sampling of 52 adults, and it therefore cannot be deemed conclusive. (P.C.#10 at 6.)

The Agency introduced the following items into the record as attachments to its public comment: a) a U.S.EPA fact sheet on *Aspergillus fumigatus* (Attachment 4); b) a December 16, 1993 report entitled "*Aspergillus, Aspergillosis* and Composting Operations in California," prepared by the California Integrated Waste Management Board (Attachment 5); c) a March 1994 study prepared by the State of New York Department of Health entitled "A Prospective Study of Health Symptoms and Bioaerosol Levels Near a Yard Waste Composting Facility" (Attachment 6); and d) a January 10, 1994 memo from Shirley Baer to Judy Dyer concerning conversations between Dr. Baer from the Agency and Dr. John Walker at U.S.EPA concerning a workshop on "Bioaerosols Associated with Composting."

The Agency's review of these materials led the Agency to conclude that *Aspergillus fumigatus* spores are very common in our everyday environment in North America, and people are exposed to

it through everyday activities. The Agency also concluded that the health risks posed by *Aspergillus* for healthy people is negligible, although there are health risks for persons with allergic responses or immuno-suppressed individuals. Furthermore, the bioaerosols workshop held by the Composting Council concluded that the risks from *Aspergillus fumigatus* is low, except in the case of persons with allergic responses or who are immuno-suppressed. (P.C. #10 at 7.)

Browning-Ferris Industries (BFI) also commented on the issue of *Aspergillus* fungi. (P.C. #11.) In its comments, BFI states that it agrees that *Aspergillus* fungi should not be specifically referenced. BFI agrees that *Aspergillus* is found in many areas unrelated to composting, and that *Aspergillus* does not represent a significant danger to human health.

After reviewing the comments and materials introduced into the record concerning this matter, the Board concludes that there is insufficient evidence that *Aspergillus* or other fungi or mold found at composting facilities represent a threat to human health or the environment to warrant regulation. The Board finds persuasive the materials introduced by the Agency, all of which indicate that *Aspergillus* is found throughout the human environment, not just at composting facilities, and all of which indicate that *Aspergillus* does not represent a threat to healthy persons. Furthermore, the study introduced by Mr. Albers which indicates that there may be some health risks from airborne pathogens posed by composting facilities has not yet been finalized, and we therefore find it to be inconclusive. Nothing more in the record supports regulating airborne pathogens from composting facilities at this time.

#### Miscellaneous Issues

180-Day Closure Timeframe. In our first notice opinion in this matter, the Board asked the Agency to address whether 180 days is a sufficient amount of time for a facility to complete closure, given that maturation of compost is climate dependent. (First Notice Opinion at 16.) The Agency responded to this issue at the August 3, 1994 hearing. In its response, the Agency indicated that landscape waste can be composted during the winter months in Illinois by using management techniques which conserve heat in the piles of material. (Tr.3 at 19.) Using these techniques, composting can be completed within 180 days, even under adverse weather conditions. Furthermore, the Agency also pointed out that Section 832.202(i) allows permitted facilities to specify an alternate closure schedule in an application.

The Agency also examined the compost regulations of fifteen other states, to determine how they addressed the closure timeframe. Only two of these states, Ohio and Wisconsin,

specified a closure period, both of which specified a period of 180 days. (Tr.3 at 19.)

Based on the Agency's representations that closure can be accomplished within 180 days even under adverse weather conditions, the Board retains the 180 day timeframe for closure in this second notice proposal.

Additional Monitoring Authority. In its public comment, the Agency states that the Board's removal of "additional monitoring to demonstrate compliance with any standard set forth in this Subpart or the Act" as proposed by the Agency in Section 830.205(m)(3) is inconsistent with the Board's first notice opinion at p. 20. Specifically, the Agency states that the Board's proposal does not allow the Agency to require thermal processing or monitoring to demonstrate compliance with pathogens.

The Board believes the Agency is mistaken. Section 830.504 states that facilities which use an additive which may cause an exceedence of the pathogen standard in Section 830.503(f) shall test for pathogens using the method set forth in 830.Appendix B. The Agency must approve the use of all additives other than water at permitted facilities, and the Agency can determine as part of the approval process whether a particular additive has potential to cause an exceedence of the pathogen standard.

The Agency also raised concerns about whether the rules restrict the use of new technologies and innovative processes. The Board points out that such processes and technologies could always be accommodated through permitting, or if necessary, through an adjusted standard from the Board.

Bulking Agents. In this second notice opinion and order, the Board has added language concerning a restriction on materials which can be used as bulking agents. This new language, located in Section 830.202(b), provides as follows:

Any bulking agent used which is otherwise a waste as defined at Section 3.53 of the Act, other than landscape waste, may only be used as authorized by the Agency in writing or by permit.

This language is not intended to change the requirements under the regulations, but rather is intended to clarify a previously existing restriction. At the August 3rd hearing, Shirley Baer testified on behalf of the Agency that a facility which uses waste materials as bulking agents would need a permit, since it is treating waste. (Tr.3 at 147.) The added language in Section 830.202(b) is intended to clearly state in the regulations that waste materials cannot be used as bulking agents at landscape waste compost facilities unless their use is



approved by the Agency. Likewise, the Board notes that additives which are wastes cannot be used without a permit from the Agency. (Tr.3 at 145.)

The new language is located in Section 830.202, and it is therefore applicable to all facilities except on-site facilities. However, since landscape waste facilities are only authorized to accept and compost landscape waste, a facility which added waste to its process other than landscape waste would be treating waste, and would necessarily be something more than a landscape waste compost facility. An on-site facility would therefore still require additional authorization from the Agency to use waste other than landscape waste in its process.

In its comments, the Agency raises concerns regarding the definitions of "on-farm compost operation", stating that there is potential for confusion, considering that composting other than landscape waste composting can take place on a farm (e.g., dead animal composting, livestock waste composting). In order to clarify which facilities are intended to be subject to these regulations, the term "on-farm compost operation" has been replaced with the term "on-farm landscape waste compost operation." Similarly, the Agency indicated that it found the term "on-site/off-site facility" confusing. Therefore, this term has been replaced with the term "on-site commercial facility." This term is intended to clarify that facilities in this class are located on-site and offer their compost for off-site sale or use, i.e., engage in commercial activity.

#### CONCLUSION

The Board believes that the dialogue which occurred among the participants and with the Board was instrumental, better enabling the Board to refine the rules originally proposed to address the major concerns of the participants concerning the applicability scheme, odor control, and end-product metal standards. While the suggestions proposed by all are not incorporated or adopted, the Board is confident that the changes made at first notice, in addition to the rules already proposed for adoption, provide Illinois with one of the most advanced and protective scheme for regulating landscape waste compost facilities and their end-product.

#### ORDER

The Board hereby proposes the following regulations to be codified at 35 Ill. Adm. Code Parts 830-832. The Board directs the Clerk to cause the filing of these regulations for Second Notice with the Joint Committee on Administrative Rules.

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

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

830.TABLE A Inorganic Concentration Limits for General Use Compost  
830.TABLE B Sampling and Handling Requirements  
830.TABLE C Seed Germination Record Sheet  
830.APPENDIX A Early Detection and Groundwater Monitoring Program  
830.APPENDIX B Performance Test Methods

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 38].

SOURCE: Adopted at \_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

NOTE: Capitalization denotes statutory language.

SUBPART A: GENERAL PROVISIONS

Section 830.101 Purpose, Scope and Applicability

- a) The purpose of this Part is to establish:
  - 1) Performance standards for landscape waste compost facilities operating in the State of Illinois; and
  - 2) Testing procedures and standards for end-product compost offered, by a facility, for sale or for use in the State of Illinois.

## b) General applicability.

- 1) The provisions of this Part apply to all landscape waste compost facilities operating in the State of Illinois, except those expressly exempted pursuant to Section 830.104, and those regulated pursuant to 35 Ill. Adm. Code 391 and 40 CFR Part 503.
- 2) Facilities regulated pursuant to this Part are not subject to 35 Ill. Adm. Code 807 or 810 through 815, except that any accumulation of materials meeting the 35 Ill. Adm. Code 810 definition of a waste pile shall be subject to 35 Ill. Adm. Code 810 through 815.
- 3) Facilities regulated pursuant to Subpart B shall accept only landscape waste for composting.

## c) Specific applicability.

- 1) The provisions of this Subpart apply to all facilities subject to this Part; the definitions set forth in Section 830.102 apply for purposes of this Part, 35 Ill. Adm. Code 831, and 35 Ill. Adm. Code 832.
- 2) The performance standards set forth in Subpart B are applicable to landscape waste composting facilities subject to this Part.
- 3) The performance standards set forth in Subpart E are applicable to all general use compost offered for sale or for use in Illinois; the testing requirements set forth in Subpart E are applicable to facilities offering general use compost for sale or for use in Illinois.
- 4) The financial assurance requirements set forth in Subpart F are applicable to all facilities subject to this Part that are required to have a permit pursuant to 35 Ill. Adm. Code 831.

## Section 830.102 Definitions

Except as stated in this Section, the definition of each word or term used in this Part, 35 Ill. Adm. Code 831 and 35 Ill. Adm. Code 832 shall be the same as that applied to the same word or term in the Environmental Protection Act ("Act") [415 ILCS 5/1 et seq.].

"Act" means the Environmental Protection Act [415 ILCS 5/1 et seq.].

"Additive" means components, other than landscape waste, added to composting material to maximize the decomposition process by adjusting any of the following: moisture, temperature, oxygen transfer, pH, carbon to nitrogen ratio, biology or biochemistry of the composting material.

"Aerated static pile" means a composting system that uses a series of perforated pipes or equivalent air distribution systems running underneath a compost pile and connected to a blower that either draws or blows air through the piles. Little or no pile agitation or turning is performed.

"Aerobic" means done in the presence of free oxygen.

"Aerobic composting" means a process managed and maintained to promote maturation of organic materials by microbial action in the presence of free oxygen contained within the gas in the composting material.

"Agency" means the Illinois Environmental Protection Agency.

"AGRONOMIC RATES" MEANS THE APPLICATION OF NOT MORE THAN 20 TONS PER ACRE PER YEAR, EXCEPT THAT THE AGENCY MAY ALLOW A HIGHER RATE FOR INDIVIDUAL SITES WHERE THE OWNER OR OPERATOR HAS DEMONSTRATED TO THE AGENCY THAT THE SITE'S SOIL CHARACTERISTICS OR CROP NEEDS REQUIRE A HIGHER RATE. (Section 21(q) of the Act.)

"Anaerobic composting" means a process managed and maintained to promote maturation of organic materials by microbial action in the absence of free oxygen within the gas in the composting material.

"Bad Load" means a load of material that would, if accepted, cause or contribute to a violation of the Act, even if managed in accordance with these regulations and any facility permit conditions.

"Batch" means material used to fill the vessel of a contained composting system.

"Board" means the Illinois Pollution Control Board.

"Bulking agent" means a material used to increase porosity, to improve aeration, or to absorb moisture from decomposing waste.

"Closure" means the process of terminating composting facility operations pursuant to applicable Sections in

this Part, 35 Ill. Adm. Code 831 and 35 Ill. Adm. Code 832, beginning upon permit expiration without filing for renewal, intentional cessation of waste acceptance or cessation of waste acceptance for greater than 180 consecutive days, unless an alternative time frame is approved in a closure plan.

"Commercial activity" means any activity involving the transfer of money.

"COMPOST" MEANS THE HUMUS-LIKE PRODUCT OF THE PROCESS OF COMPOSTING WASTE, WHICH MAY BE USED AS A SOIL CONDITIONER. (Section 3.70 of the Act.)

"COMPOSTING" MEANS THE BIOLOGICAL TREATMENT PROCESS BY WHICH MICROORGANISMS DECOMPOSE THE ORGANIC FRACTION OF THE WASTE, PRODUCING COMPOST. (Section 3.70 of the Act.) Land application is not composting.

"Composting area" means the area of a facility in which waste, composting material or undistributed end-product compost is unloaded, stored, staged, stockpiled, treated or otherwise managed.

"Composting material" means solid wastes that are in the process of being composted.

"Composting operation" means an enterprise engaged in the production and distribution of end-product compost.

"Contained composting process" means a method of producing compost in which the composting material is confined or contained in a vessel or structure which both protects the material from the elements and controls the moisture and air flow.

"Designated use compost" means end-product compost which does not meet the standards set forth in Section 830.503 of this Part.

"Dewar flask" means an insulated container used especially to store liquefied gases, having a double wall, an evacuated space between the walls and silvered surfaces.

"Domestic sewage" means waste water derived principally from dwellings, business or office buildings, institutions, food service establishments, and similar facilities.

"End-product compost" means organic material that has been processed to maturity and classified as general

use compost or designated use compost in accordance with this Part.

"Facility" means any landscape waste compost facility.

"GARBAGE" IS WASTE RESULTING FROM THE HANDLING, PROCESSING, PREPARATION, COOKING, AND CONSUMPTION OF FOOD, AND WASTES FROM THE HANDLING, PROCESSING, STORAGE, AND SALE OF PRODUCE. (Section 3.11 of the Act.)

"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.

"General use compost" means end-product compost which meets the standards set forth in Section 830.503 of this Part.

"GROUNDWATER" MEANS UNDERGROUND WATER WHICH OCCURS WITHIN THE SATURATED ZONE AND GEOLOGIC MATERIALS WHERE THE FLUID PRESSURE IN THE PORE SPACE IS EQUAL TO OR GREATER THAN ATMOSPHERIC PRESSURE. (Section 3(b) of the Groundwater Protection Act [415 ILCS 55/1 et seq.].)

"In-vessel composting" means a diverse group of composting methods in which composting materials are contained in a building, reactor, or vessel.

"In-vessel continuous feed system" means a method of producing compost in which the raw composting material is delivered on a continuous basis to a reactor.

"Insulating material" means material used for the purpose of preventing the passage of heat out of a windrow or other pile. Insulating material includes, but is not limited to, end-product compost, foam, or soil. Insulating material does not include composting material that has not reached maturity.

"Land application" means the spreading of waste, at an agronomic rate, as a soil amendment to improve soil structure and crop productivity.

"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. (Section 3.20 of the Act.)

"Landscape waste compost facility" means an entire landscape waste composting operation, with the exception of a garden compost operation.

"Landscape waste leachate" means a liquid containing any of the following: waste constituents originating in landscape waste; landscape waste composting material; additives; and end-product compost.

"Maturity" means a state which is characteristically: generally dark in color; humus-like; crumbly in texture; not objectionable in odor; resembling rich topsoil; and bearing little resemblance in physical form to the waste from which it is derived.

"Modification" means a permit revision authorizing either an extension of the current permit term or a physical or operational change at a composting facility which involves different or additional processes, increases the capacity of the operation, requires construction, or alters a requirement set forth as a special condition in the existing permit.

"MPN" means most probable number, a mathematical inference of the viable count from the fraction of cultures that fail to show growth in a series of tubes containing a suitable medium.

"Nearest residence" means an occupied dwelling and adjacent property commonly used by inhabitants of the dwelling.

"Non-compostable material" means items not subject to microbial decomposition under conditions used to compost waste.

"Off-site" means not on-site.

"On-farm landscape waste compost facility" means a landscape compost facility which satisfies all of the criteria set forth in Section 830.106.

"On-site" means on the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection and access is by crossing as opposed to going along the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way which the owner controls and to which the public does not have access are also considered on-site property.



"On-site commercial facility" means a landscape waste compost facility at which the landscape waste composted is generated only on-site and the end-product is offered for off-site sale or use.

"On-site facility" means a landscape waste compost facility at which the landscape waste composted is generated only on-site and the end-product is not offered for off-site sale or use.

"Open composting process" means a method of producing compost without protecting the compost from weather conditions.

"Operator" means the individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity that is responsible for the operation of the facility. The property owner, if different from the operator, shall be deemed the operator in the event that the operator abandons the facility.

"Origin" means the legal entity from which a substance has been obtained.

"Processing into windrows or other piles" means placement of waste materials into windrows or other piles of a size, structure, and mixture adequate to begin the composting process.

"Property owner" means the owner of the land on which the composting operation is located or proposed to be located, except that if the operator has obtained a lease for at least the duration of the proposed facility permit plus one year, then "property owner" shall mean the operator of the composting operation.

"Registered professional engineer" means a person registered under the Illinois Professional Engineering Practice Act [225 ILCS 325/1 et seq.].

"Relatively impermeable soil" means a soil located above the water table that has a hydraulic conductivity no greater than  $1 \times 10^{-5}$  centimeters per second for a thickness of at least one foot.

"Runoff" means water resulting from precipitation that flows overland before it enters a defined stream channel, excluding any portion of such overland flow that infiltrates into the ground before it reaches the

stream channel, and any precipitation that falls directly into a stream channel.

"Runon" means any rainwater, leachate or other liquid that drains over land onto any part of a facility.

"Salvaging" means the return of waste materials to beneficial use.

"Salvaging operations" means those activities that recover waste for beneficial use, so long as the activity is done under the supervision of the compost facility's operator, does not interfere with or otherwise delay the operations of the compost facility, and results in the removal of all materials for salvaging from the compost facility daily or separation by type and storage in a manner that does not create a nuisance, harbor vectors, or cause an unsightly appearance.

"Septage" means the liquid portions and sludge residues removed from septic tanks.

"Sewage" means water-carried human and related waste from any source.

"SITE" MEANS ANY LOCATION, PLACE, TRACT OF LAND, AND FACILITIES, INCLUDING BUT NOT LIMITED TO BUILDINGS, AND IMPROVEMENTS USED FOR PURPOSES SUBJECT TO REGULATION OR CONTROL BY THIS ACT OR REGULATIONS THEREUNDER.  
(Section 3.43 of the Act.)

"SLUDGE" MEANS ANY SOLID, SEMISOLID, OR LIQUID WASTE GENERATED FROM A MUNICIPAL, COMMERCIAL, OR INDUSTRIAL WASTEWATER TREATMENT PLANT, WATER SUPPLY TREATMENT PLANT, OR AIR POLLUTION CONTROL FACILITY, OR ANY OTHER SUCH WASTE HAVING SIMILAR CHARACTERISTICS AND EFFECTS.  
(Section 3.44 of the Act.)

"SPECIAL WASTE" MEANS ANY INDUSTRIAL PROCESS WASTE, POLLUTION CONTROL WASTE OR HAZARDOUS WASTE, EXCEPT AS DETERMINED PURSUANT TO SECTION 22.9 OF THE ACT and 35 Ill. Adm. Code 808. (Section 3.45 of the Act.)

"Stability" means a state in which the compost decomposes slowly even under conditions favorable for microbial activity.

"Staging area" means an area within a facility where raw material for composting is processed, temporarily stored in accordance with the standards set forth in 830.205(a)(1)(A), loaded or unloaded.

"Surface water" means all tributary streams and drainage basins, including natural lakes and artificial reservoirs, which may affect a specific water supply above the point of water supply intake. Such term does not include treatment works (such as a retention basin).

"Ten (10) year, 24 hour precipitation event" means a precipitation event of 24 hour duration with a probable recurrence interval of once in 10 years.

"20-20-20 NPK" means a fertilizer containing 20 percent total nitrogen (N), 20 percent available phosphoric acid ( $P_2O_5$ ) and 20 percent soluble potash ( $K_2O$ ).

"Unacceptable load" means a load containing waste a facility is not authorized to accept.

"Underground water" means all water beneath the land surface.

"Vector" means any living agent, other than human, capable of transmitting, directly or indirectly, an infectious disease.

"Water table" means the boundary between the unsaturated and saturated zones of geologic materials or the surface on which the fluid pressure in the pores of a porous medium is exactly at atmospheric pressure.

"Windrow" means an elongated pile of solid waste or composting material constructed to promote composting.

"Woody landscape waste" means plant material greater than two inches in diameter.

#### Section 830.103 Incorporations by Reference

The Board incorporates the following material by reference. These incorporations include no later amendments or editions.

- a) American Public Health Association et al., 1015 Fifteenth Street, N.W., Washington, D.C. 20005, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992.
- b) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," (Third Edition, September, 1986, as amended by Revision I (December, 1987), Final Update I (November, 1992) and Proposed Update II (July,

1992)), United States Environmental Protection Agency, Washington, D.C., EPA Publication Number SW-846.

- c) North Dakota Agricultural Experiment Station, North Dakota State University, Fargo, North Dakota 58105, "Recommended Chemical Soil Test Procedures for the North Central Region," North Central Regional Publication No. 221 (Revised), Bulletin No.499 (Revised), October 1988.

#### Section 830.104 Exempt Operations and Activities

- a) The requirements of this Part shall not apply to a garden compost operation as defined at Section 830.102.
- b) The testing requirements set forth in Subpart E of this Part SHALL NOT APPLY TO END-PRODUCT COMPOST USED AS A DAILY COVER OR VEGETATIVE AMENDMENT IN THE FINAL LAYER of a landfill. (Section 22.33(c) of the Act.)
- c) Notwithstanding subsection (b) of this Section, end-product compost must not be used as daily cover or vegetative amendments in the final layer of a landfill unless such use is approved in the landfill's permit.

#### Section 830.105 Permit-Exempt Facilities and Activities

The following types of facilities or activities are not required to have a permit pursuant to this Part:

- a) A LANDSCAPE WASTE COMPOSTING OPERATION FOR LANDSCAPE WASTES GENERATED BY SUCH facility's OWN ACTIVITIES WHICH ARE STORED, TREATED OR DISPOSED OF WITHIN THE SITE WHERE SUCH WASTES ARE GENERATED (Section 21(q)(1) of the Act); OR
- b) APPLYING LANDSCAPE WASTE OR COMPOSTED LANDSCAPE WASTE AT AGRONOMIC RATES (Section 21(q)(2) of the Act); OR
- c) A LANDSCAPE WASTE COMPOSTING FACILITY ON A FARM WHICH MEETS ALL OF the criteria set forth at Section 830.106 (Section 21(q)(3) of the Act).

#### Section 830.106 On-Farm Landscape Waste Compost Facility

- a) A landscape compost operation on a farm must satisfy all of the following criteria:
  - 1) THE COMPOSTING FACILITY IS OPERATED BY THE FARMER ON PROPERTY ON WHICH THE COMPOSTING MATERIAL IS UTILIZED, AND THE COMPOSTING FACILITY CONSTITUTES NO MORE THAN 2% OF THE PROPERTY'S TOTAL ACREAGE,

EXCEPT THAT THE AGENCY MAY ALLOW A HIGHER PERCENTAGE FOR INDIVIDUAL SITES WHERE THE OWNER OR OPERATOR HAS DEMONSTRATED TO THE AGENCY THAT THE SITE'S SOIL CHARACTERISTICS OR CROP NEEDS REQUIRE A HIGHER RATE;

- 2) THE PROPERTY ON WHICH THE COMPOSTING FACILITY IS LOCATED, AND ANY ASSOCIATED PROPERTY ON WHICH THE COMPOST IS USED, IS PRINCIPALLY AND DILIGENTLY DEVOTED TO THE PRODUCTION OF AGRICULTURAL CROPS AND IS NOT OWNED, LEASED OR OTHERWISE CONTROLLED BY ANY WASTE HAULER OR GENERATOR OF NONAGRICULTURAL COMPOST MATERIALS, AND THE OPERATOR OF THE COMPOSTING FACILITY IS NOT AN EMPLOYEE, PARTNER, SHAREHOLDER, OR IN ANY WAY CONNECTED WITH OR CONTROLLED BY ANY SUCH WASTE HAULER OR GENERATOR;
  - 3) ALL COMPOST GENERATED BY THE COMPOSTING FACILITY IS APPLIED AT AGRONOMIC RATES AND USED AS MULCH, FERTILIZER OR SOIL CONDITIONER ON LAND ACTUALLY FARMED BY THE PERSON OPERATING THE COMPOSTING FACILITY, AND THE FINISHED COMPOST IS NOT STORED AT THE COMPOSTING SITE FOR A PERIOD LONGER THAN 18 MONTHS PRIOR TO ITS APPLICATION AS MULCH, FERTILIZER, OR SOIL CONDITIONER; and
  - 4) ALL COMPOSTING MATERIAL WAS PLACED MORE THAN 200 FEET FROM THE NEAREST POTABLE WATER SUPPLY WELL, WAS PLACED OUTSIDE THE BOUNDARY OF THE 10-YEAR FLOODPLAIN OR ON A PART OF THE SITE THAT IS FLOODPROOFED, WAS PLACED AT LEAST 1/4 MILE FROM THE NEAREST RESIDENCE (OTHER THAN A RESIDENCE LOCATED ON THE SAME PROPERTY AS THE FACILITY) AND THERE ARE NOT MORE THAN 10 OCCUPIED NON-FARM RESIDENCES WITHIN 1/2 MILE OF THE BOUNDARIES OF THE SITE ON THE DATE OF APPLICATION, AND WAS PLACED MORE THAN 5 FEET ABOVE THE WATER TABLE.
- b) THE OWNER OR OPERATOR, BY JANUARY 1, 1991 (OR THE JANUARY 1 FOLLOWING COMMENCEMENT OF OPERATION, WHICHEVER IS LATER) AND JANUARY 1 OF EACH YEAR THEREAFTER shall:
- 1) REGISTER THE SITE WITH THE AGENCY, by obtaining an Illinois Inventory Identification Number from the Agency;
  - 2) File a report with the Agency, on a form provided by the Agency, certifying at a minimum:

- A) THE VOLUME OF COMPOSTING MATERIAL RECEIVED AND USED AT THE SITE during the previous calendar year;
- B) The volume of compost produced during the previous calendar year; and
- C) That the facility is in compliance with the requirements set forth in subsection (a) of this Section.

(Section 21(q) of the Act.)

Section 830.107 Compliance Dates

- a) All operators of existing facilities shall comply with the applicable minimum performance standards and recordkeeping requirements set forth in Section 830.202 of this Part by the effective date of these regulations.
- b) Within one year of the effective date of these regulations, all operators of existing permitted facilities shall certify compliance with the applicable provisions set forth in Sections 830.206, 830.210, 830.211, 830.504 and 830.507. Certification of compliance with Sections 830.206, 830.210, 830.211, 830.504 and 830.507 shall be done by completing and filing with the Agency a form provided by the Agency.
- c) Within one year of the effective date of these regulations, all operators of existing permitted facilities shall certify compliance with Subpart F of this Part. Such certification of compliance shall be done as specified in Section 830.606.
- d) Each existing permitted facility shall, in addition, remain in compliance with all conditions set forth in its current facility permit, pending permit expiration or modification authorizing construction, resulting in an increase in capacity, transferring ownership or extending the current permit term.
- e) Upon application either for permit renewal or for modification authorizing construction, resulting in an increase in capacity, extending the current permit term or initiated by the Agency pursuant to 35 Ill. Adm. Code 832.201, an existing permitted facility shall demonstrate, as part of the permit application, compliance with all provisions of this Part applicable to permitted facilities.

Section 830.108 Severability

If any provision of these regulations is adjudged invalid, or if the application thereof to any person or in any circumstance is adjudged invalid, such invalidity shall not affect the validity of either this Part as a whole or any Subpart, Section, subsection, sentence or clause thereof not adjudged invalid.

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

Section 830.201 Scope and Applicability

- a) Garden compost facilities are exempt from all the requirements of Part 830.
- b) On-site landscape waste compost facilities are subject to the location standards in Section 830.203.
- c) On-site commercial landscape waste compost facilities are subject to the minimum performance standards in Section 830.202, the location standards in Section 830.203, and the end-product quality standards in Subpart E of this Part.
- d) On-farm landscape waste compost facilities which satisfy all the requirements in Section 830.106(a) are subject to the minimum performance standards in Section 830.202.
- e) Permitted landscape waste compost facilities are subject to the minimum performance standards in Section 830.202, the location standards in Section 830.203, the additional operating standards and requirements in Sections 830.204 through 830.213, the end-product quality standards of Subpart E of this Part, and the financial assurance requirements of Subpart F of this Part.

Section 830.202 Minimum Performance Standards and Reporting Requirements for Landscape Waste Compost Facilities

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

- a) The composting material shall not contain any domestic sewage, sewage sludge or septage.
- b) Any bulking agent used which is otherwise a waste as defined at Section 3.53 of the Act, other than

landscape waste, may only be used as authorized by the Agency in writing or by permit.

- c) The operator shall take specific measures to control odors and other sources of nuisance so as not to cause or contribute to a violation of the Act. Specific measures an operator should take to control odor include but are not limited to adherence to the contents of the odor minimization plan required at subsection (e). Specific measures an operator should take to control other sources of nuisance include preventative measures to control litter, vectors, and dust and noise generated from truck or equipment operation.
- d) The operator shall have available for inspection a PLAN FOR INTENDED PURPOSES OF END-product compost and a contingency plan for handling end-product compost and composting material that does not meet the general use compost standards set forth in Section 830.503 of this Part. Such a plan may include, but is not limited to, consideration of the following: on-site usage; identification of potential buyers including but not limited to gardeners, landscapers, vegetable farmers, turf growers, operators of golf courses, and ornamental crop growers; maintaining consistent product quality for such factors as stability, color, texture, odor, pH, and man-made inerts; and removal of end-product compost that cannot be used in the expected manner because it does not meet the general use compost standards. (Section 22.33(a)(4) of the Act.)
- e) The operator shall have a plan for minimizing odors. The plan must include:
  - 1) Specification of a readily-available supply of bulking agents, additives or odor control agents;
  - 2) Procedures for avoiding delay in processing and managing landscape waste during all weather conditions;
  - 3) Methods for taking into consideration the following factors prior to turning or moving composting material:
    - A) Time of day;
    - B) Wind direction;
    - C) Percent moisture;



- D) Estimated odor potential; and
  - E) Degree of maturity.
- f) Landscape waste must be processed within five days of receipt into windrows or other piles which promote proper conditions for composting. Incoming leaves, brush or woody landscape waste may be stored in designated areas for use as a carbon source and bulking agent, rather than being processed into windrows or other piles.
- g) The facility must be designed and constructed so that runoff is diverted around the composting area. The runoff from the facility resulting from precipitation less than or equal to the 10 year, 24 hour precipitation event must be controlled so as not to cause or contribute to a violation of the Act.
- h) The facility must be constructed and maintained to have an accessible clear space between windrows or other piles, suitable for housekeeping operations, visual inspection of piling areas and fire fighting operations.
- i) Except for on-farm landscape waste compost facilities, the operator shall post permanent signs at each entrance, the text of which specifies in letters not less than three inches high:
- 1) The name and mailing address of the operation;
  - 2) The operating hours;
  - 3) Materials which can be accepted; and
  - 4) The statement, "COMPLAINTS CONCERNING THIS FACILITY CAN BE MADE TO THE FOLLOWING PERSONS," followed by the name and telephone number of the operator, and the name and telephone number of the Bureau of Land, Illinois Environmental Protection Agency, Springfield Illinois.
- j) General use compost, if offered for sale or use, must meet the performance standards set forth in Section 830.503.
- k) Reporting Requirements.
- 1) The operator of any facility required, pursuant to 35 Ill. Adm. Code 831, to have a permit SHALL SUBMIT A WRITTEN ANNUAL STATEMENT TO THE AGENCY,

on a form provided by the Agency, ON OR BEFORE APRIL 1 OF EACH YEAR THAT INCLUDES:

- A) AN ESTIMATE OF THE AMOUNT OF MATERIAL, IN TONS, RECEIVED FOR COMPOSTING in the previous calendar year (Section 39(m) of the Act);
  - B) An estimate of the amount and disposition of compost material (i.e., end-product compost, chipped/shredded brush) in the previous calendar year; and
  - C) A Composting Facility Financial Assurance Plan Compliance Certification in accordance with the requirements set forth in Section 830.606.
- 2) For any permit-exempt facility composting over 100 cubic yards of landscape waste per year with over 100 cubic yards of composting material on-site at one time, a report must be filed by April 1st of each year with the Agency, on a form provided by the Agency, stating, at a minimum, the facility location, an estimate of the amount of material, in cubic yards or tons, received for composting in the previous calendar year, and the total amount of end-product compost still on-site, used or sold during the previous calendar year.
- 1) Closure.
- 1) Unless otherwise authorized in a facility permit, all landscape waste, composting material, end-product compost, and additives must be removed from the facility within 180 days following the beginning of closure.
  - 2) An operator of a facility regulated under this Subpart shall close the facility in a manner which:
    - A) Minimizes the need for further maintenance; and
    - B) Controls, minimizes or eliminates the release of landscape waste, landscape waste constituents, landscape waste leachate, and composting constituents to the groundwater or surface waters or to the atmosphere to the

extent necessary to prevent threats to human health or the environment.

- 3) By April 1 of the year following completion of closure, the operator of a facility required to report pursuant to subsection (h)(2) of this Section shall file a report with the Agency verifying that closure was completed in accordance with this Section in the previous calendar year.
- m) Odor complaints.
- 1) Except for on-farm landscape waste compost facilities, for every odor complaint received, the operator shall:
    - A) Record and report to the Agency within 24 hours of receiving the complaint, the date and time received, the name of complainant, the address and phone number of complainant, if volunteered upon request, and the name of the personnel receiving the complaint.
    - B) Record the date, time, and nature of any action taken in response to an odor complaint, and report such information to the Agency within 7 days of the complaint.

Section 830.203      Location Standards for Landscape Waste Compost Facilities

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

- a) 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.)
- b) 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.)
- 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 must 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.)

- d) 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.
- e) 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:
  - 1) Using published water table maps or other published documentation to establish the location of the water table in relation to site elevation; or
  - 2) Actual measuring of the water table elevation at least once per month for three consecutive months.
- f) The facility must meet all requirements under the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.).
- g) 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.
- h) The facility must not be located in any area where it may pose a threat of harm or destruction to the features for which:
  - 1) An irreplaceable historic or archaeological site has been listed pursuant to the National Historic

Preservation Act (16 U.S.C. 470 et seq.) or the Illinois Historic Preservation Act [20 ILCS 3410/1 et seq.];

- 2) A natural landmark has been designated by the National Park Service or the Illinois State Historic Preservation Office; or
  - 3) A natural area has been designated as a Dedicated Illinois Nature Preserve pursuant to the Illinois Natural Areas Preservation Act [525 ILCS 30/1 et seq.].
- i) 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 U.S.C. 1531 et. seq.), or the Illinois Endangered Species Protection Act [520 ILCS 10/1 et seq.].

Section 830.204            Additional Stormwater and Landscape Waste  
Leachate Controls at Permitted Landscape  
Waste Compost Facilities

In addition to the leachate control requirement set forth in Section 830.202(g), all permitted landscape waste compost facilities must comply with the following:

- a) Stormwater or other water which comes into contact with landscape waste received, stored, processed or composted, or which mixes with landscape waste leachate, must be considered landscape waste leachate and must be collected and reused in the process, properly disposed of off-site, or treated as necessary prior to discharge off-site to meet applicable standards of 35 Ill. Adm. Code Subtitle C.
- b) Ponding of landscape waste leachate within the facility must be prevented, except to the extent done by design and approved in the facility permit.
- c) Soil surfaces used for composting must be allowed to dry periodically in order to promote aerobic conditions in the soil subsurface.

Section 830.205            Additional Operating Standards for Permitted  
Landscape Waste Compost Facilities

All permitted landscape waste compost facilities must comply with the following operating standards, in addition to those set forth in Sections 830.202 and 830.204:

a) Composting Process

- 1) All permitted landscape waste compost facilities must meet the following composting process standards:
  - A) Landscape waste must be processed within 24 hours of receipt at the facility into windrows, other piles or a contained composting system providing proper conditions for composting. Incoming leaves, and brush or woody landscape waste, may be stored in designated areas for use as a carbon source and bulking agent, if so provided as a permit condition, rather than being processed in windrows or other piles.
  - B) Unless the facility is designed for anaerobic composting, the operator shall take measures to adjust the oxygen level, as necessary, to promote aerobic composting. Aeration intensity must be altered to suit the varying oxygen requirements that different landscape wastes may have.
  - C) The operator shall take measures to maintain the moisture level of the composting material within a range of 40% to 60% on a dry weight basis.
  - D) The staging area must be adequate in size and design to facilitate the unloading of landscape waste from delivery vehicles and the unobstructed maneuvering of vehicles and other equipment.
  - E) Neither landscape waste nor composting material may be mixed with end-product compost ready to be sold or offered for use. This prohibition shall not apply to the use of end-product compost as an amendment to composting material.
  - F) The facility must have sufficient equipment and personnel to process incoming volumes of landscape waste accepted within the time frames required in this Section, and

sufficient capacity to handle projected incoming volumes of landscape waste.

- G) The operator shall obtain written authorization from the Agency to use any additive, other than water, prior to its use. Unless otherwise authorized any additive, or combination of additives, other than water, must not exceed 10%, by volume, of the composting material.
- 2) An operator of a landscape waste compost facility using an open composting process shall turn each windrow or other pile at least four times per year and not less than once every six months. This provision does not apply to composting systems designed for anaerobic conditions.
  - 3) An operator of a permitted landscape waste compost facility using a contained composting process shall have mechanisms to control moisture, air flow and air emissions. These mechanisms must be operated and maintained throughout the landscape waste composting process as specified in any permit required pursuant to 35 Ill. Adm. Code 831.
  - 4) Operators of permitted facilities required to process composting material to further reduce pathogens shall comply with the applicable thermal processing requirement among the following:
    - A) If the facility uses a windrow composting process, during a 15 consecutive day period the temperature throughout each windrow must be maintained at 55°C or greater and, during the same period, each windrow must be turned a minimum of 5 times;
    - B) If the facility uses an aerated static pile composting process, the composting material must be covered with 6 to 12 inches of insulating material, and the temperature throughout each pile material must be maintained at 55°C or greater for 3 consecutive days; and
    - C) If the facility uses an in-vessel composting process, the temperature of the composting material throughout the mixture must be maintained at 55°C or greater for 3 consecutive days.

## b) Composting Surface

## 1) Open Composting Processes

## A) Composting areas must be:

- i) located on relatively impermeable soils, as demonstrated by actual measurement;
- ii) located on a base with resistance to saturated flow equivalent to the resistance of relatively impermeable soil; or
- iii) subject to an early detection and groundwater monitoring program, pursuant to subsection (m)(3) of this Section.

## B) The composting surface must be constructed and maintained to allow:

- i) Diversion of runoff waters away from the landscape waste and compost;
- ii) Management of runoff waters and landscape waste leachate in accordance with Section 830.204; and
- iii) Facility operation during all weather conditions.

## C) The surface of the landscape waste composting area of the facility must be sloped at two percent or greater unless an alternative water management system to promote drainage and to prevent surface water ponding is approved in the facility permit.

## 2) Contained Composting Processes

## A) Composting areas at facilities at which composting material or leachate comes into contact with an open composting surface must be:

- i) Located on relatively impermeable soils, as demonstrated by actual measurement;
- ii) located on a base with resistance to saturated flow equivalent to the resistance of relatively impermeable soil; or



- iii) Subject to an early detection and groundwater monitoring program, pursuant to subsection (m)(3) of this Section.
- B) The composting surface must support all structures and equipment.
- c) Utilities. All utilities necessary for safe operation in compliance with the requirements of this Part, including, but not limited to, lights, power, water supply and communications equipment, must be available at the facility at all times.
- d) Maintenance. The operator shall maintain and operate all systems and related appurtenances and structures in a manner that facilitates proper operations in compliance with the requirements of this Part. If a breakdown of equipment occurs, standby equipment must be used or additional equipment brought on site as necessary to comply with the requirements of this Part and any pertinent permit conditions.
- e) Open Burning. Open burning is prohibited except in accordance with 35 Ill. Adm. Code 200 through 245.
- f) Dust Control. The operator shall implement methods for controlling dust in accordance with Subparts B and K of 35 Ill. Adm. Code 212.
- g) Noise Control. The facility must be designed, constructed, operated and maintained so as not to cause or contribute to a violation of 35 Ill. Adm. Code 900 through 905 or of Section 24 of the Act.
- h) Vector Control. Insects, rodents, and other vectors must be controlled so as not to cause or contribute to a violation of the Act.
- i) Fire Protection. The operator shall institute fire protection measures including, but not limited to, maintaining a supply of water and radio or telephone access to the nearest fire department. Fire extinguishers must be provided at two separate locations within the facility.
- j) Litter Control. The operator shall control litter at the facility. At a minimum:
  - 1) The operator shall patrol the facility daily to check for litter accumulation. All litter must be collected in a secure container for later disposal; and

- 2) Litter must be confined to the property on which the facility is located. At the conclusion of each day of operation, any litter strewn beyond the confines of the facility must be collected and disposed of at a facility approved to receive such waste in accordance with the applicable Board regulations.
- k) Management of Non-compostable Wastes. The operator shall develop management procedures for collection, containment and disposal of non-compostable wastes received at the facility. Disposal must be at a facility approved to receive such waste in accordance with applicable Board regulations at 35 Ill. Adm. Code 810 through 815.
  - l) Mud Tracking. The operator shall implement measures, such as the use of wheel washing units or rumble strips, to prevent tracking of mud by delivery vehicles onto public roadways.
  - m) Monitoring
    - 1) At a minimum, for batch, windrow and pile systems:
      - A) The temperature of each batch, windrow or pile of composting material must be monitored on a weekly basis;
      - B) The moisture level in each batch, windrow or pile of composting material must be monitored once every two weeks; and
      - C) For aerobic composting, the oxygen level of each batch, windrow or pile of composting material must be monitored weekly.
    - 2) At a minimum, for in-vessel continuous feed systems:
      - A) The temperature of the composting material must be monitored daily;
      - B) The moisture of the composting material must be monitored daily, unless otherwise authorized by the Agency in a facility permit; and
      - C) For aerobic composting by means of an in-vessel continuous feed system, the oxygen level of the composting material must be monitored daily.

- 3) Early detection and groundwater monitoring, if required pursuant to Section 830.205(b)(1)(A) or Section 830.205(b)(2)(A), must be done in accordance with 35 Ill. Adm. Code 830.Appendix A.

Section 830.206            Operating Plan for Permitted Landscape Waste Compost Facilities

All activities at a permitted facility associated with composting must be conducted in accordance with an operating plan containing, at a minimum, the following information:

- a) Designation of personnel, by title, responsible for operation, control and maintenance of facility;
- b) A description of the anticipated quantity and variation throughout the year of waste to be received;
- c) Methods for measuring incoming waste;
- d) Methods to control the types of waste received, in accordance with Section 830.209, and methods for removing, recovering and disposing of non-compostables, in accordance with Sections 830.205(k), 830.207 and 830.209;
- e) Methods to control traffic and to expedite unloading in accordance with Section 830.205(a)(1)(D);
- f) Management procedures that will be used in composting, which must include:
  - 1) A description of any treatment the wastes will receive prior to windrowing (e.g., chipping, shredding) and the maximum length of time required to process each day's receipt of waste into windrows;
  - 2) The specifications to which the windrows will be constructed (width, height, and length) and calculation of the capacity of the facility;
  - 3) A list of additives, including the type, amount and origin, that will be used to adjust moisture, temperature, oxygen transfer, pH, carbon to nitrogen ratio, or biological characteristics of the composting material, and rates and methods of application of such additives; and
  - 4) An estimate of the length of time necessary to complete the composting process.

- g) Methods to minimize odors. In addition to the requirements specified in 830.202(e), the operating plan must include:
- 1) A management plan for bad loads;
  - 2) A demonstration that the processing and management of anticipated quantities of landscape waste can be accomplished during all weather conditions;
  - 3) Procedures for receiving and recording odor complaints, investigating immediately in response to any odor complaints to determine the cause of odor emissions, and remedying promptly any odor problem at the facility;
  - 4) Additional odor-minimizing measures, which may include the following:
    - A) Avoidance of anaerobic conditions in the composting material;
    - B) Use of mixing for favorable composting conditions;
    - C) Formation of windrow or other pile into a size and shape favorable to minimizing odors; and
    - D) Use of end-product compost as cover to act as a filter during early stages of composting.
- h) Methods to control stormwater and landscape waste leachate, in accordance with Section 830.204;
- i) Methods to control noise, vectors and litter, in accordance with Section 830.205;
- j) Methods to control dust emissions, in accordance with Section 830.205(f), which must include:
- 1) Consideration of the following factors prior to turning or moving the composting material:
    - A) Time of day;
    - B) Wind direction;
    - C) Percent moisture;
    - D) Estimated emission potential; and

- E) Degree of Maturity; and
- 2) Maintenance of roads, wetting of roads, use of dust control agents, or any combination of these methods;
- k) Methods for monitoring temperature, oxygen level and moisture level of the composting material, in accordance with Section 830.205(m);
- l) Methods for adjusting temperature, oxygen level and moisture level of the composting material, in accordance with Section 830.205(a);
- m) Recordkeeping and reporting procedures required pursuant to Section 830.211; and
- n) Methods to obtain composite samples and test end-product compost to demonstrate compliance with Subpart E of this Part.

Section 830.207            Salvaging at Permitted Landscape Waste  
Compost Facilities

- a) Salvaging operations at permitted landscape waste compost facilities must not interfere with the operation of the landscape waste facility or result in a violation of any standard in this Part.
- b) All salvaging operations must be performed in a safe and sanitary manner in compliance with the requirements of this Part.
- c) Salvageable materials:
  - 1) May be accumulated on-site by the operator, provided they are managed so as not to create a nuisance, harbor vectors, cause malodors, or create an unsightly appearance; and
  - 2) Must not be accumulated in a manner meeting the definition of a waste pile.

Section 830.208            Access Control at Permitted Landscape Waste  
Compost Facilities

The operator of a permitted landscape waste compost facility shall implement controls to limit unauthorized access, in order to prevent random dumping and to ensure safety at the facility.

Section 830.209            Load Checking at Permitted Landscape Waste  
Compost Facilities

- a) Each load received at a permitted landscape waste compost facility must be inspected, upon receipt, for its acceptability at the facility and must be visually checked, prior to processing, for noncompostable waste.
- b) The facility must reject unacceptable loads.

Section 830.210            Personnel Training for Permitted Landscape Waste Compost Facilities

- a) The operator of a permitted landscape waste compost facility shall provide training to all personnel prior to the facility's initial operation. In addition, annual personnel training shall be provided, which must include, at a minimum, a thorough explanation of the operating procedures for both normal and emergency situations.
- b) New employees shall be trained, prior to participating in operations at the facility, in facility operations, maintenance procedures, and safety and emergency procedures relevant to their employment.
- c) The operator shall have personnel sign an acknowledgement stating that they have received the training required pursuant to this Section.
- d) The facility operating plan required pursuant to Section 830.206 must be made available and explained to all employees.

Section 830.211            Recordkeeping for Permitted Landscape Waste Compost Facilities

- a) Copies of the facility permit, design plans, operating plan, and any required reports must be kept at the facility, or at a definite location specified in the operating plan or permit, so as to be available during inspection of the facility.
- b) The operator shall record the following information:
  - 1) The quantity of each load of landscape waste received;
  - 2) The origin, type and quantity of any additive accepted, when received at the facility;
  - 3) The type and quantity of any additive used in the composting process (water added during composting need not be quantified), as quantified based on a monthly review of additives remaining;

- 4) The dates of turning of each windrow or other pile;
  - 5) All monitoring data required pursuant to a facility permit;
  - 6) Conditions evaluated pursuant to Section 830.206;
  - 7) For any odor complaint received, the information collected pursuant to section 830.202(m);
  - 8) Details of all incidents that require implementation of the facility's contingency plan, in accordance with Section 830.212, and methods used to resolve them;
  - 9) Records pertaining to sampling and testing, as follows:
    - A) Locations in the composting area from which samples are obtained;
    - B) Number of samples taken;
    - C) Volume of each sample taken;
    - D) Date and time of collection of samples;
    - E) Name and signature of person responsible for sampling;
    - F) Name and address of laboratory receiving samples, if applicable; and
    - G) Signature of person responsible for sample analysis.
  - 10) The daily quantity of each type of end-product compost removed from the facility, according to end-product compost classification provided in Subpart E of this Part; and
  - 11) Verification that requisite personnel training has been done, in accordance with Section 830.210.
- c) The operator shall keep dated copies of the end-product compost analyses required pursuant to Section 830.504.
  - d) The records required pursuant to this Section must be made available during normal business hours for inspection and photocopying by the Agency. Such records must be kept for a period of three years,

subject to extension upon written request by the Agency and automatic extension during the course of any enforcement action relating to the facility. Records must be sent to the Agency upon request.

Section 830.212           Contingency Plan for Permitted Landscape Waste Compost Facilities

- a) A contingency plan must be established, addressing the contingencies set forth in Section 830.202(c) and the following additional contingencies:
  - 1) Equipment breakdown;
  - 2) Odors;
  - 3) Unacceptable waste delivered to the facility;
  - 4) Groundwater contamination;
  - 5) Any accidental release of special waste; and
  - 6) Conditions such as fires, dust, noise, vectors, power outages and unusual traffic conditions.
- b) The facility contingency plan must be available on-site and implemented as necessary.

Section 830.213           Closure Plan for Permitted Landscape Waste Compost Facilities

- a) A written closure plan must be developed which contains, at a minimum, the following:
  - 1) Steps necessary for the premature final closure of the facility under circumstances during its intended operating permit term when the cost of closure would be the greatest;
  - 2) Steps necessary for, and a schedule for the completion of, the routine final closure of the facility at the end of its intended operating life; and
  - 3) Steps necessary to prevent damage to the environment during temporary suspension of landscape waste acceptance if the facility permit allows temporary suspension of landscape waste acceptance at the facility without initiating final closure.



- b) Until completion of closure has been certified, the operator shall maintain a copy of the closure plan at the facility or at a definite location, specified in the facility permit, so as to be available during inspection of the facility.
- c) An operator of a facility shall develop and file a revised closure plan upon modification of the operations of the facility which affect the cost of closure of the facility or any portion thereof, which include, but are not limited to:
  - 1) A temporary suspension of landscape waste acceptance at the facility; or
  - 2) An increase in the design capacity at the facility to process landscape waste.
- d) The operator shall initiate implementation of the closure plan within 30 days following the beginning of closure.
- e) Not later than 30 days following the beginning of closure, the operator shall post signs, easily visible at all access gates leading into the facility. The text of such signs must read, in letters not less than three inches high: "This facility is closed for all composting activities and all receipt of landscape waste materials. No dumping allowed. Violators will be prosecuted." Such signs must be maintained in legible condition until certification of completion of closure is issued for the facility by the Agency.
- f) Notice of Closure. The operator shall send notice of closure to the Agency within 30 days following the beginning of closure. A compost closure report must be submitted to the Agency, on a form provided by the Agency, which must cover the time elapsed since the end of the last annual report period.
- g) Certificate of Completion of Closure.
  - 1) Upon completion of closure, the operator shall prepare and submit to the Agency an affidavit, on a form provided by the Agency, stating that the facility has been closed in accordance with the closure plan.
  - 2) Upon finding that the facility has been closed in accordance with the closure plan, the Agency shall issue a certificate of completion of closure and shall terminate the facility permit.

- h) The operator shall maintain financial assurance as provided in Subpart F.

SUBPART E: QUALITY OF END-PRODUCT COMPOST

Section 830.501 Scope and Applicability

- a) END-PRODUCT COMPOST USED AS DAILY COVER OR VEGETATIVE AMENDMENT IN THE FINAL LAYER of a landfill is exempt from the requirements set forth in this Subpart. (Section 22.33(c), of the Act.)
- b) The provisions set forth in Sections 830.502, 830.503, and 830.507 of this Subpart apply to all end-product compost subject to this Part.
- c) In addition, the provisions set forth in Sections 830.504 and 830.508 apply to all end-product compost derived from landscape waste and subject to this Part.

Section 830.502 Compost Classes

For the purpose of this Part, end-product compost must be classified in the following manner:

- a) General Use Compost: End-product compost which meets the standards set forth in Section 830.503.
- b) Designated Use Compost: End-product compost which does not qualify as general use end-product compost. Designated use compost must be used only AS DAILY COVER OR VEGETATIVE AMENDMENT IN THE FINAL LAYER at a landfill. (Section 22.33(c), of the Act.)

Section 830.503 Performance Standards for General Use Compost

General-use compost:

- a) Must be free of any materials which pose a definite hazard to human health due to physical characteristics, such as glass or metal shards;
- b) Must not contain man-made materials larger than four millimeters in size exceeding 1% of the end-product compost, on a dry weight basis;
- c) Must have a pH between 6.5 and 8.5;
- d) Must have reached stability, as demonstrated by one of the methods prescribed in Section 830.Appendix B;

- e) Must not exceed, on a dry weight basis, the inorganic concentrations set forth in Section 830.Table A; and
- f) Must not contain fecal coliform populations that exceed 1000 MPN per gram of total solids (dry weight basis), or Salmonella species populations that exceed 3 MPN per 4 grams of total solids (dry weight basis).

Section 830.504            Testing Requirements for End-Product Compost  
Derived from Landscape Waste

- a) Operators shall perform testing to demonstrate compliance with the standards set forth in subsections (b) - (e) of Section 830.503. Such testing must be done in accordance with the methods set forth in Section 830.Appendix B, except that an alternative method or methods may be used to demonstrate compliance with any of these standards, if approved in writing by the Agency.
- b) Operators of facilities which are authorized to use an additive pursuant to Section 830.205(a)(1)(G) which may cause an exceedence of Section 830.503(f) shall test for pathogens using the method set forth in Section 830.Appendix B, except that an alternative method or methods may be used to demonstrate compliance with any of these standards, if approved in writing by the Agency.
- c) For any facility not required to have a permit, no testing need be done to demonstrate compliance with the inorganics standards set forth in Section 830.Table A for general use compost derived from landscape waste.
- d) End-product compost derived from landscape waste must be tested for the parameters set forth in Section 830.503 at a frequency of:
  - 1) Once every 5,000 cubic yards of end-product compost transported off-site; or
  - 2) Once per year, if less than 5,000 cubic yards of end-product compost are transported off-site per year.

Section 830.507            Sampling Methods

Sample collection, preservation, and analysis must be done in a manner which assures valid and representative results. A composite sample must be prepared by one of the following methods:

- a) Twelve grab samples, each 550 milliliters in size, must be taken from the end-product compost at the facility, in the following manner:
- 1) Four grab samples from points both equidistant throughout the length and at the center of the windrow or other pile, at a depth not less than one meter from the surface of the windrow or other pile;
  - 2) Four grab samples from points both equidistant throughout the length and one quarter the width of windrow or other pile, at a depth not less than half the distance between the surface and the bottom of the windrow or other pile; and
  - 3) Four grab samples from points both equidistant throughout the length and one eighth the width of the windrow or other pile, at a depth not less than half the distance between the surface and the bottom of the windrow or other pile.
  - 4) The twelve grab samples must be thoroughly mixed to form a homogenous composite sample. Analyses must be of a representative subsample. The sample holding times, sample container types and minimum collection volumes listed in Section 830. Table B shall apply; or
- b) Sampling methods set forth in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), incorporated by reference at 35 Ill. Adm. Code 830.103.

Section 830.508 Off-Specification Compost

End-product compost derived from landscape waste which does not meet the standards for general use compost set forth in this Subpart must be further managed as landscape waste or as designated use compost.

SUBPART F: FINANCIAL ASSURANCE

Section 830.601 Scope and Applicability

- a) This Subpart provides procedures by which the operator of any composting facility required, pursuant to 35 Ill. Adm. Code 831, to have a permit shall demonstrate compliance with the financial assurance plan requirement set forth in Section 22.33 of the Act.

- b) The operator is not required to comply with the provisions of this Subpart if the operator demonstrates that:
  - 1) Closure and post-closure care plans filed pursuant to 35 Ill. Adm. Code 724, 725, 807 or 811 will result in closure of the facility in accordance with the requirements of this Part; and
  - 2) The operator has provided financial assurance adequate to provide for such closure and post-closure care pursuant to 35 Ill. Adm. Code 724, 725, 807 or 811.

#### Section 830.602 Financial Assurance Plan

The operator shall develop and have at the facility, and submit to the Agency in accordance with 35 Ill. Adm. Code 831.112, a financial assurance plan containing, at a minimum, the following information:

- a) A written cost estimate, determined pursuant to Section 830.603, covering the maximum cost of premature final closure; and
- b) The financial mechanism chosen by the operator to comply with the requirement set forth in Section 830.604(a).

#### Section 830.603 Written Cost Estimate

- a) The written cost estimate required pursuant to Section 830.602(a) must be based on the steps necessary to complete closure in accordance with Section 830.213, and must include an itemization of the cost to complete each step.
- b) The operator shall revise the current cost estimate whenever a change in the closure plan increases the cost estimate.

#### Section 830.604 Financial Assurance Fund

- a) The operator shall maintain financial assurance equal to or greater than the amount provided as a written cost estimate in the financial assurance plan.
- b) The funds comprising financial assurance must be used to cover the cost of closure.

- c) Upon certification of completion of closure, any financial assurance funds remaining must be made available for unrestricted use.

Section 830.605 Financial Assurance Mechanism

- a) The operator may utilize either of the following mechanisms to comply with Section 830.604:
  - 1) A cash reserve fund; or
  - 2) Self-insurance.
- b) An operator choosing to use a cash reserve account as the mechanism by which to comply with Section 830.604 shall:
  - 1) Fully fund the account within one year of the initial receipt of waste, except that facilities in operation on the effective date of this Part shall fully fund the account within one year of the effective date; and
  - 2) Thereafter maintain full funding pending the expenditure of such funds to cover the costs of closure.
- c) An operator choosing to use self-insurance as the mechanism by which to comply with subsection (a) of this Section shall have:
  - 1) Net working capital and tangible net worth each at least six times the current cost estimate;
  - 2) Tangible net worth of at least \$10 million;
  - 3) Assets in the United States amounting to at least 90 percent of the operator's total assets and at least six times the current cost estimate; and
  - 4) Either:
    - A) Two of the following three ratios: a ratio of total liabilities to net worth of less than 2.0; a ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities of greater than 0.1; or a ratio of current assets to current liabilities of greater than 1.5; or
    - B) A current rating of AAA, AA, A or BBB for its most recent bond issuance, as issued by

Standard and Poor, or a rating of Aaa, Aa, A or Bbb, as issued by Moody.

Section 830.606 Financial Assurance Certification

The operator shall submit to the Agency, one year from the effective date of this Part and thereafter as part of the annual report, a Composting Facility Financial Assurance Plan Compliance Certification, so titled, which contains the following information:

- a) Operator name;
- b) Illinois Inventory Identification Number and Permit Number assigned by the Agency;
- c) Facility name;
- d) Address and county in which the facility is located; and
- e) A statement certifying compliance with the provisions of this Subpart.

Section 830. Table A Inorganic Concentration Limits for General Use Compost

	Maximum Concentration Limit (mg/kg dry weight basis)	Test Method (SW-846)
Arsenic	41	7060 or 7061
Cadmium	21	7130 or 7131 or 6010
Chromium	1,200	7190 or 7191 or 6010
Copper	1,500	7210 or 7211 or 6010
Lead	300	7420 or 7421 or 6010
Mercury	17	7471
Nickel	420	7520 or 6010
Selenium	36	7740 or 7741
Zinc	2,800	7950 or 7951 or 6010

Section 830. Table B Sampling and Handling Requirements

Parameter	Container Type	Minimum Sample Size (ml)	Preservation	Maximum Storage Time
Man-made materials	P, G	1,000	Do not freeze	28 days
pH	P, G	50	Analyze immediately	
Seed				

Germination	P, G	1,000	Analyze immediately
Self-heating	P, G	4,000	Analyze immediately
Pathogens	P, G	500	Cool to 4° C 2 weeks
Inorganic	P(A), G(A)	500	Cool to 4° C 6 months

P = plastic; G = glass; G(A), P(A) = rinsed with acid cleaning solution (1 part water to 1 part concentrated HNO<sub>3</sub>)



## Section 830. Table C Seed Germination Record Sheet

Date Test Initiated:

Date Test Read:

Person responsible for test:

**% Germination**

<u>Blend</u>	<u>Pot ID</u>	<u>Number of Annual Ryegrass Seedlings</u>	<u>Number of Radish Seedlings</u>
A	A <sub>1</sub>		
A	A <sub>2</sub>		
A	A <sub>3</sub>		
A	A <sub>4</sub>		
B	B <sub>1</sub>		
B	B <sub>2</sub>		
B	B <sub>3</sub>		
B	B <sub>4</sub>		
C	C <sub>1</sub>		
C	C <sub>2</sub>		
C	C <sub>3</sub>		
C	C <sub>4</sub>		

**Annual Ryegrass**

$$\text{Blend A} = \frac{(A_1 + A_2 + A_3 + A_4) / 4}{(C_1 + C_2 + C_3 + C_4) / 4} \times 100\% = \underline{\quad\quad} \% \text{ Germination}$$

$$\text{Blend B} = \frac{(B_1 + B_2 + B_3 + B_4) / 4}{(C_1 + C_2 + C_3 + C_4) / 4} \times 100\% = \underline{\quad\quad} \% \text{ Germination}$$

**Radish**

$$\text{Blend A} = \frac{(A_1 + A_2 + A_3 + A_4) / 4}{(C_1 + C_2 + C_3 + C_4) / 4} \times 100\% = \underline{\quad\quad} \% \text{ Germination}$$

$$\text{Blend B} = \frac{(B_1 + B_2 + B_3 + B_4) / 4}{(C_1 + C_2 + C_3 + C_4) / 4} \times 100\% = \underline{\quad\quad} \% \text{ Germination}$$

**General Plant Conditions****BLEND A**  
Condition

<u>Pots</u>	<u>Seedling</u>	<u>Parameter</u>	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>High</u>
A <sub>1</sub> - A <sub>4</sub>	Ryegrass	Wilting				
A <sub>1</sub> - A <sub>4</sub>	Ryegrass	Chlorosis				
A <sub>1</sub> - A <sub>4</sub>	Ryegrass	Discoloration				
A <sub>1</sub> - A <sub>4</sub>	Ryegrass	Malodorous				
A <sub>1</sub> - A <sub>4</sub>	Ryegrass	Fungal Growth				

Other Comments:

**BLEND B**  
Condition

<u>Pots</u>	<u>Seedling</u>	<u>Parameter</u>	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>High</u>
B <sub>1</sub> - B <sub>4</sub>	Ryegrass	Wilting				
B <sub>1</sub> - B <sub>4</sub>	Ryegrass	Chlorosis				
B <sub>1</sub> - B <sub>4</sub>	Ryegrass	Discoloration				
B <sub>1</sub> - B <sub>4</sub>	Ryegrass	Malodorous				
B <sub>1</sub> - B <sub>4</sub>	Ryegrass	Fungal Growth				

Other Comments:

**BLEND C**  
Condition

<u>Pots</u>	<u>Seedling</u>	<u>Parameter</u>	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>High</u>
C <sub>1</sub> - C <sub>4</sub>	Ryegrass	Wilting				
C <sub>1</sub> - C <sub>4</sub>	Ryegrass	Chlorosis				
C <sub>1</sub> - C <sub>4</sub>	Ryegrass	Discoloration				
C <sub>1</sub> - C <sub>4</sub>	Ryegrass	Malodorous				
C <sub>1</sub> - C <sub>4</sub>	Ryegrass	Fungal Growth				

Other Comments:

General Conclusion on the Stability of the Compost tested:

Section 830.Appendix A Early Detection and Groundwater  
Monitoring Program

The operator of a compost facility subject to the monitoring requirements of 35 Ill. Adm. Code 830.205(b)(1)(A) or 35 Ill. Adm. Code 830.205(b)(2)(A) shall implement an Agency-approved monitoring program using, at a minimum, the procedures and standards set forth in this Appendix.

a) Program.

- 1) The operator shall perform a hydrogeologic site investigation pursuant to subsection (b) of this Section to characterize the subsurface and determine the location and quality of groundwater beneath the facility.
- 2) An appropriate monitoring system must be designed, capable of determining the compost facility's impact or potential impact on the quality of groundwater beneath the facility.
- 3) If the water table is located greater than ten (10) feet below ground surface and the soil has been classified as a soil exhibiting moderate or poor drainage by the U.S. Department of Agriculture's Soil Conservation Service on a published county soil survey map, the owner or operator shall install either an early detection system, pursuant to subsection (d)(1) of this Section, or a groundwater monitoring system, pursuant to subsection (d)(2) of this Section. Otherwise, a groundwater monitoring system must be installed, pursuant to subsection (d)(2) of this Section.
- 4) If either early detection monitoring or groundwater monitoring indicates an impact on underground water beneath the facility, a site evaluation must be performed, using the procedures set forth in subsection (e) of this Section, and remedial action implemented, if appropriate.
- 5) The results of the hydrogeologic site investigation and the proposed monitoring system design must be submitted to the Agency as part of an application for a facility permit.

- b) Hydrogeologic Site Investigation. The operator shall conduct a hydrogeologic site investigation to obtain the following information:
- 1) The regional hydrogeologic setting of the facility, using material available from Illinois scientific surveys, state and federal organizations, water well drilling logs and previous investigations. A complete list of references and any well logs utilized must be submitted to the Agency with the results of the hydrogeologic site investigation;
  - 2) The site-specific hydrogeologic setting of the facility, using continuously sampled borings of the site and information collected from on-site piezometers or monitoring wells. At a minimum, borings must be to a depth of ten (10) feet;
  - 3) Soil characteristics, including soil types and physical properties of the underlying strata, including the potential pathways for contaminant migration. Any confining unit relative to waste constituents expected to be present must be identified;
  - 4) Water-bearing sediments or geologic units beneath the facility, their classification pursuant to 35 Ill. Adm. Code 620 and the direction and rate of groundwater flow. Also, regional and local areas of groundwater discharge and recharge affecting groundwater at the facility must be identified; and
  - 5) Water quality beneath the facility, including any potential impact on groundwater. The groundwater quality analysis must take into account the type of compost facility and its expected leachate constituents.
- c) All drill holes, including exploration borings that are not converted into monitoring wells, monitoring wells that are no longer necessary to the operation of the facility, and other holes that may cause or facilitate contamination of groundwater, must be sealed in accordance with the standards of 35 Ill. Adm. Code 811.316.
- d) Monitoring System
- 1) Early Detection System
    - A) Monitoring device(s) must be installed:
      - i) Hydraulically upgradient from the facility or at sufficient distance from the composting

area so as not to be affected by it, to establish representative background water quality in the waters beneath (or near) the facility; and

- ii) Beneath and around the composting area, sufficient to enable early detection of the downward migration of constituents related to the composting activities at the facility.
- B) The parameters monitored must be those expected to be in the leachate, taking into consideration the type of compost facility.
- C) If lysimeters are utilized, the following requirements must be used in designing an adequate monitoring system;
- i) Lysimeters must be located, when possible, in a depression in the path of site runoff in each direction of flow and topographically low areas associated with the unit(s).
  - ii) At a minimum, each lysimeter must be sampled within 48 hours of each rain event exceeding 0.5 inches, provided that the rain event is not within two weeks after the date previous samples were successfully collected.
  - iii) Any lysimeter placed around the perimeter must be installed at an angle so that the cup of the lysimeter is beneath the unit(s).
- 2) Groundwater Monitoring System
- A) Monitoring well(s) must be installed:
- i) Hydraulically upgradient from the facility, to establish representative background water quality in the groundwater beneath (or near) the facility; and
  - ii) Hydraulically downgradient (i.e., in the direction of decreasing static head) from the compost facility. Locations and depths of monitoring wells must ensure detection of waste constituents that migrate from the waste management unit to the groundwater.
- B) The parameters monitored must be those expected to be in the leachate, taking into consideration the type of compost facility.

- C) The groundwater monitoring system must be installed at the closest practicable distance from the composting area boundary, or at an alternative distance specified by permit.
- 3) Approval of any early detection monitoring system or groundwater monitoring system must be obtained from the Agency prior to operation.
- e) Evaluation
- 1) Further evaluation of an impact to underground water must be required if:
    - A) An exceedence of the appropriate standard as stated in 35 Ill. Adm. Code 620 is confirmed;
    - B) A progressive increase in measured parameters other than pH is observed over two consecutive sampling events; or
    - C) Where groundwater monitoring wells are used, a statistical increase over background or upgradient concentrations, calculated in accordance with 35 Ill. Adm. Code 811.320(e), is observed.
  - 2) An impact as described in subsection (e)(1)(A) or (e)(1)(C) of this Section must be confirmed by resampling the underground water within 30 days of the date on which the first sample analyses are received. The operator shall provide notification to the Agency of the results of the resampling analysis within 30 days of the date on which the sample analyses are received, but no later than 90 days after the first samples were taken.
  - 3) Within 60 days of the confirmation of impact but no later than 120 days after the date on which the first sample was taken, the operator shall propose as a permit modification a plan to address the impact, which may include further evaluation of data, including the use of appropriate statistical methods, groundwater monitoring or remedial action.

## Section 830.APPENDIX B Performance Test Methods

## a) Man-made materials

- 1) Take four 250 gram samples.
- 2) Dry samples at 70° C for 24 hours. Let sample cool to room temperature (20 to 25° C).
- 3) Weigh each sample and pass through a four millimeter screen. Inspect material remaining on the screen, and separate and weigh man-made materials. Calculate percent man-made materials relative to the total dry weight of the sample prior to screening.

## b) Pathogens

The end product compost must be tested to demonstrate compliance with one of the pathogen reduction standards set forth in Section 830.503(f). Such testing must be done in accordance with Standard Methods for the Examination of Water and Wastewater Part 9221 E or Part 9222 D, incorporated by reference at 35 Ill. Adm. Code 830.103, for fecal coliform, and Standard Methods for the Examination of Water and Wastewaters Part 9260 D incorporated by reference at 35 Ill. Adm. Code 830.103, for Salmonella sp. bacteria.

## c) pH

The following protocol must be used to determine the pH of the compost:

North Central Regional Publication 221, Method 14; or EPA Method 9045 in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), both incorporated by reference at 35 Ill. Adm. Code 830.103.

## d) Stability

The operator shall demonstrate that the composite sample has reached stability by showing either:

- 1) That the compost does not reheat, upon standing, to greater than 20° C above room temperature (20 to 25° C). The degree of reheating must be measured using the following method:
  - A) Take 4 liters of composite sample and adjust the moisture of the end-product compost so it falls within the range of 45 to 55% water on a dry weight basis;

- B) Fill a 2 liter Dewar flask (100 millimeters, inside diameter) loosely with sample within acceptable moisture range and gently tap to simulate natural settling. Keep at room temperature (20 to 25° C).
- C) Insert thermometer into Dewar flask to a point 5 centimeters from bottom of flask. Do not push thermometer against bottom of flask.
- D) Record time and temperature each day for 15 days to determine when the highest point is reached. After each reading, shake down the thermometer; or
- 2) That the end-product compost supports a germination rate of 70% for annual ryegrass and radish using the following protocol:

- A) Mix 4 liters vermiculite with 4 grams of air-dried soil.
- B) Take 1 liter of the composite sample with a moisture level within the range of 45 to 55 percent, on a dry weight basis; if necessary, adjust the moisture level until within such range.
- C) In three 2-liter containers, combine the vermiculite-soil mix with the compost sample at the following ratios:

Blend	Vermiculite-Soil Mix (grams)	Compost (45 to 55% moisture) (dry weight basis) (grams)
A (75% compost, w/w)	320	960
B (50% compost, w/w)	640	640
C (Control)	1,280	0

- D) Break up lumps of compost with a spatula or trowel. Moisten the blend with water.
- E) Cover each container with plastic wrap and mix well by inverting each container 20 times.
- F) Transfer each blend into four 4-inch pots. Fill the pots to the brim and firm the surface by pressing down with the bottom of another 4-inch



pot. Leave about 2 to 5 centimeters of space between surface of the blend and the top of the pot.

- G) Add approximately 50 milliliters of water soluble fertilizer (e.g., 20-20-20 NPK, fish emulsion) diluted to half-strength to each pot.
- H) Place 10 seeds of annual ryegrass and 10 radish seeds onto the surface of the moistened blend. Cover the seeds with about 1 centimeter dry vermiculite.
- I) Set the pots in a tray of warm water and let them remain there until capillary action has drawn water up and moistened the surface of the blend. Remove the pots from the tray when moisture from the bottom-watering is observed.
- J) Put pots in an environment suitable for plant growth (e.g., 8 to 12 hours of light daily, 30 to 60% humidity, 20 to 25° C). Check pots daily to determine if watering is needed. Blends should be kept evenly moist. If necessary, cover each pot with plastic wrap until the seedlings emerge. Remove plastic wrap at the first sign of emergence.
- K) Seven days after planting the seeds, count emergent seedlings in each pot and record visual observations of relative plant conditions identified in Section 830. Table C.
- L) Calculate the percent germination of plants in each blend relative to the control pot, using the formula set forth in Section 830. Table C.

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 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].

SOURCE: Adopted at \_\_\_ Ill. Register \_\_\_\_, effective \_\_\_\_\_.

NOTE: Capitalization denotes statutory language.

SUBPART A: GENERAL INFORMATION REQUIRED FOR  
ALL COMPOST FACILITIES

Section 831.101 Scope and Applicability

This Part contains the procedures to be followed by all applicants in applying for permits required pursuant to Section 21(d) of the Act. The definitions set forth in 35 Ill. Adm. Code 830.102 apply to this Part.

Section 831.102 Severability

If any provision of this Rule is adjudged invalid, or if the application thereof to any person or in any circumstance is adjudged invalid, such invalidity shall not affect the validity of either this Part as a whole or any Subpart, Section, subsection, sentence or clause thereof not adjudged invalid.

Section 831.103 Certification by Professional Engineer

All designs presented in the application must be prepared by, or under the supervision of, a professional engineer if required by the Illinois Professional Engineering Practice Act [225 ILCS 325/1 et seq]. The professional engineer shall affix the name of the engineer, date of preparation, registration number, a statement attesting to the accuracy of the information and design and a professional seal to all designs.

Section 831.104 Application Fees

The permit application must be accompanied by all filing fees required pursuant to Section 5(f) of the Act.

Section 831.105 Required Signatures

- a) All permit applications must contain the full legal name, address and telephone number of the operator, the property owner, if different from the operator, and any duly authorized agent(s) of the operator or property owner to whom all inquiries and correspondence must be addressed.
- b) All permit applications must be signed by the operator and the property owner, if different from the operator, or the duly authorized agent(s) of the operator or property owner, accompanied by an oath or affidavit attesting to the agent's authority to sign the application, if applicable, and notarized. The following persons are considered duly authorized agents of the operator and the property owner:

- 1) For corporations, a principal executive officer of at least the level of vice president;
- 2) For a sole proprietorship or partnership, the proprietor or a general partner, respectively; and
- 3) For a municipality, state, federal or other public agency, the head of the agency or ranking elected official.

#### Section 831.106 Site Identification

For existing permitted sites, the site name and the Illinois Inventory Identification Number previously assigned by the Agency shall be used in correspondence with the Agency regarding the facility. Permit applications for new facilities must include the proposed facility name, the latitude and longitude of the site, if available, the legal description of the site, if available, and the physical location, including at a minimum the city or township, county, state and zip code. An Illinois Inventory Identification Number will be assigned by the Agency.

#### Section 831.107 Site Location Map

All permit applications must 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 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 30/1 et seq.];
- f) All historic and archaeological sites designated by the National Historic Preservation Act (16 U.S.C. 470 et seq.) and the Illinois Historic Preservation Act [20 ILCS 3410/1 et seq.];

- g) All areas identified as a critical habitat pursuant to the Endangered Species Act (16 U.S.C. 1531 et seq.) and the Illinois Endangered Species Protection Act [520 ILCS 10/1 et seq.];
- 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.

Section 831.108      Site Plan Map

The application must contain maps or plan sheets showing the location of the facility, on a scale no smaller than one inch equals 200 feet, containing five-foot contour intervals where the relief exceeds 20 feet and a two-foot contour interval where the relief is 20 feet or less, and referenced to a USGS datum. The following information must be provided:

- a) The boundaries of the facility;
- b) The boundaries of the composting area(s);
- c) The property boundaries, if different;
- d) The location of all buildings on the property and any other pertinent location data with respect to the operation of the proposed facility (i.e., utilities, water supply, fencing, access roads, paved areas, etc.);
- e) The location of all staging and stockpiling areas for landscape waste, end-product compost, windrow bulking agents or additives;
- f) The drainage patterns of the composting facility and surrounding areas. At a minimum, the direction of both on-site and off-site drainage, as well as the location of any ditches, swales, berms or other structures that exist or will be constructed to

control runoff and leachate generated by the facility's operation must be identified; and

- g) Proof that all authorizations, permits, and approvals required from each Bureau of the Agency have been applied for or obtained.

#### 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).
  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 830.205(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.

#### Section 831.110      Legal Description

The permit application must contain a legal description of the facility boundary. Data supplied by any registered land surveyor contained in the permit application must bear the signature or seal of that registered land surveyor. References are to be included when such data are obtained from published sources.

#### Section 831.111      Proof of Land Ownership and Certification

The permit application must contain a certificate of ownership of the land on which the facility is located or a copy of the lease and its duration. The lease must clearly specify that the property owner authorizes the construction of a composting facility on the leased premises. The operator or property owner shall certify that the Agency will be notified 30 days prior to any changes in property ownership or conditions in the lease affecting the permit area.

#### Section 831.112      Closure Plan

The permit application must contain a written closure plan which contains a description of methods for compliance with all closure requirements in 35 Ill. Adm. Code 830.

Section 831.113 Financial Assurance

The permit application must contain methods to ensure financial assurance satisfying the requirements in 35 Ill. Adm. Code 830. Subpart F.

Section 831.114 Operator-Initiated Modification of an Approved Permit

- a) To initiate a permit modification authorizing construction, resulting in an increase in capacity or extending the term of the existing permit, the operator shall file a complete permit application, on a form provided by the Agency, demonstrating compliance with all applicable requirements set forth in 35 Ill. Adm. Code 830.
- b) To initiate any other permit modification, the operator shall submit, on a form provided by the Agency, a request for the desired modification. The applicant shall submit all information required pursuant to this Part which pertains to the desired modification.

Section 831.115 Modification to Obtain Operating Authorization

Unless otherwise authorized in the facility permit, prior to placing into service any structure constructed at a facility, the applicant shall obtain an operating authorization as a permit condition. In order to obtain such an operating authorization, the operator shall submit a report documenting that construction has been completed in accordance with the engineering design.

Section 831.116 Permit Renewal

- a) The operator shall submit only that information required pursuant to this Part that has changed since the last permit review by the Agency.
- b) The operator shall update any groundwater impact assessment, in accordance with 35 Ill. Adm. Code 830. Appendix A.
- c) The operator shall provide a new cost estimate for closure pursuant to 35 Ill. Adm. Code 830.213 and 35 Ill. Adm. Code 830. Subpart F, based upon the maximum cost of premature final closure in the next permit term.



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

PART 832  
PROCEDURAL REQUIREMENTS FOR PERMITTING COMPOST FACILITIES

SUBPART A: GENERAL PROVISIONS

Section  
832.101 Scope and Applicability  
832.102 Severability  
832.103 Form and Delivery of Permit Application  
832.104 Required Notifications  
832.105 Agency Decision Deadlines  
832.106 Standards for Issuance of a Permit  
832.107 Standards for Denial of a Permit  
832.108 Permit Appeals  
832.109 Permit No Defense  
832.110 Term of Permit  
832.111 Transfer of Permits

SUBPART B: ADDITIONAL PROCEDURES FOR MODIFICATION OF PERMITS

Section  
832.201 Agency-Initiated Modification of an Approved Permit  
832.202 Procedures for a Modification of an Approved Permit

SUBPART C: ADDITIONAL PROCEDURES FOR THE RENEWAL OF PERMITS

Section  
832.301 Time of Filing  
832.302 Effect of Timely Filing  
832.303 Procedures for Permit Renewal

AUTHORITY: Implementing Sections 5, 21, 22.26, 22.33, 22.34, 22.35, 39, 39.2 and 40 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 22.26, 22.33, 22.34, 22.35, 27 and 38].

SOURCE: Adopted at \_\_\_ Ill. Register\_\_\_, effective \_\_\_\_\_.

NOTE: Capitalization denotes statutory language.

## SUBPART A: GENERAL PROVISIONS

## Section 832.101 Scope and Applicability

This Part contains the procedures to be followed by the Agency in processing permits required pursuant to Section 21(d) of the Act and 35 Ill. Adm. Code 831. The definitions set forth in 35 Ill. Adm. Code 830.102 apply to this Part.

## Section 832.102 Severability

If any provision of this Rule is adjudged invalid, or if the application thereof to any person or in any circumstance is adjudged invalid, such invalidity shall not affect the validity of either this Part as a whole or any Subpart, Section, subsection, sentence or clause thereof not adjudged invalid.

## Section 832.103 Form and Delivery of Permit Application

All permit applications must be made on forms prescribed by the Agency, and must be mailed or delivered to the address designated by the Agency on the forms. The Agency shall provide a dated, signed receipt upon request. The Agency's record of the date of filing shall be deemed conclusive unless a contrary date is proved by a dated, signed receipt. Permit applications which are hand-delivered must be delivered during the Agency's normal business hours.

## Section 832.104 Required Notifications

THE AGENCY SHALL NOT ISSUE A DEVELOPMENT OR CONSTRUCTION PERMIT AFTER DECEMBER 31, 1990 FOR ANY COMPOSTING FACILITY, UNLESS THE APPLICANT HAS GIVEN NOTICE THEREOF:

- a) IN PERSON OR BY MAIL TO THE MEMBERS OF THE GENERAL ASSEMBLY FROM THE LEGISLATIVE DISTRICT IN WHICH THE PROPOSED FACILITY IS TO BE LOCATED;
- b) BY REGISTERED OR CERTIFIED MAIL TO THE OWNERS OF ALL REAL PROPERTY LOCATED WITHIN 250 FEET OF THE SITE OF THE PROPOSED FACILITY (DETERMINED AS PROVIDED IN SUBSECTION (b) OF SECTION 39.2 of the Act); AND
- c) TO THE GENERAL PUBLIC BY PUBLICATION IN A NEWSPAPER OF GENERAL CIRCULATION IN THE COUNTY IN WHICH THE PROPOSED FACILITY IS TO BE LOCATED. (Section 22.26 of the Act.)
  - 1) At a minimum, the newspaper notification must meet the following requirements:

- A) Publication in the legal notice section of a daily newspaper in circulation within the city or area in which the facility is proposed to be located;
  - B) Published once a week for three successive weeks, pursuant to Section 3 of the Illinois Notice by Publication Act [715 ILCS 5/3 (1992)].
- 2) The newspaper notification should contain:
- A) A description of the type of facility being proposed;
  - B) The location of the proposed facility;
  - C) The name of the person or corporation proposing the facility with a contact person and phone number; and
  - D) Instructions to direct comments to the Agency in writing within twenty-one (21) days after the date of last publication. The Agency address and the phone number(s) of the bureau(s) and section(s) reviewing the permit must be provided.
- 3) The notification must not be published more than 3 months before filing the application and must commence no later than the filing date. Copies of the newspaper notification must either accompany the application or be sent to the Agency within 30 days after filing the application.

Section 832.105 Agency Decision Deadlines

- a) IF THERE IS NO FINAL ACTION BY THE AGENCY WITHIN 90 DAYS AFTER THE FILING OF THE APPLICATION FOR PERMIT, THE APPLICANT MAY DEEM THE PERMIT ISSUED; EXCEPT THAT THIS TIME PERIOD SHALL BE EXTENDED TO 180 DAYS WHEN NOTICE AND OPPORTUNITY FOR PUBLIC HEARING ARE REQUIRED BY STATE OR FEDERAL LAW OR REGULATION. (Section 39(a) of the Act.)
- b) An application for permit pursuant to this Part shall not be deemed filed until the Agency has received all information and documentation in the form and with the content required pursuant to this Part, 35 Ill. Adm. Code 830 and 35 Ill. Adm. Code 831. However, if, pursuant to the standards for the

denial of a permit, the Agency fails to notify the applicant within 30 days following the filing of a purported application that the application is incomplete and the reason the Agency deems it incomplete, the application shall be deemed to have been filed as of the date of such purported filing as calculated pursuant to Section 832.103. The applicant may treat the Agency's notification that an application is incomplete as a denial of the application for the purpose of permit appeal.

- c) The applicant may waive the right to a final decision within the decision deadline. Such waiver must be submitted in writing to the Agency prior to the applicable deadline in subsection (a) of this Section.
- d) The applicant may modify a permit application at any time prior to the Agency decision deadline date. Any modification of a permit application must constitute a new application for the purposes of calculating the Agency decision deadline date.
- e) Final action must be deemed to have taken place on the date that such final action is signed.
- f) The Agency shall mail all notices of final action by registered or certified mail, postmarked with a date stamp and accompanied by a return receipt request.

Section 832.106           Standards for Issuance of a Permit

- a) WHEN THE BOARD HAS BY REGULATION REQUIRED A PERMIT FOR THE CONSTRUCTION, INSTALLATION, OR OPERATION OF ANY TYPE OF FACILITY, EQUIPMENT, VEHICLE, VESSEL, OR AIRCRAFT, THE APPLICANT SHALL APPLY TO THE AGENCY FOR SUCH PERMIT AND IT SHALL BE THE DUTY OF THE AGENCY TO ISSUE SUCH PERMIT UPON PROOF BY THE APPLICANT THAT THE FACILITY, EQUIPMENT, VEHICLE, VESSEL, OR AIRCRAFT WILL NOT CAUSE A VIOLATION OF the ACT OR OF REGULATIONS set forth in 35 Ill. Adm. Code: Chapter I.
- b) IN GRANTING PERMITS, THE AGENCY MAY IMPOSE SUCH CONDITIONS AS MAY BE NECESSARY TO ACCOMPLISH THE PURPOSES OF the ACT, AND AS ARE NOT INCONSISTENT WITH THE REGULATIONS PROMULGATED BY THE BOARD.
- c) NO PERMIT SHALL BE ISSUED BY THE AGENCY UNDER the ACT FOR CONSTRUCTION OR OPERATION OF ANY FACILITY OR SITE LOCATED WITHIN THE BOUNDARIES OF ANY SETBACK ZONE ESTABLISHED PURSUANT TO the ACT, WHERE SUCH

CONSTRUCTION OR OPERATION IS PROHIBITED. (Section 39 of the Act.)

Section 832.107 Standards for Denial of a Permit

IF THE AGENCY DENIES ANY PERMIT PURSUANT TO THIS Section, THE AGENCY SHALL TRANSMIT TO THE APPLICANT, WITHIN THE TIME LIMITATIONS for Agency decision deadlines, SPECIFIC, DETAILED STATEMENTS AS TO THE REASONS THE PERMIT APPLICATION WAS DENIED. SUCH STATEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- a) THE SECTIONS OF the ACT THAT MAY BE VIOLATED IF THE PERMIT WERE GRANTED;
- b) THE PROVISION OF THE REGULATIONS set forth in 35 Ill. Adm. Code: Chapter I, PROMULGATED PURSUANT TO the ACT, THAT MAY BE VIOLATED IF THE PERMIT WERE GRANTED;
- c) THE SPECIFIC INFORMATION, IF ANY, THE AGENCY DEEMS THE APPLICANT DID NOT PROVIDE IN ITS APPLICATION TO THE AGENCY; AND
- d) A STATEMENT OF SPECIFIC REASONS WHY THE ACT AND THE REGULATIONS set forth in 35 Ill. Adm. Code: Chapter I MIGHT BE VIOLATED IF THE PERMIT WERE GRANTED. (Section 39(m) of the Act.)

Section 832.108 Permit Appeals

IF THE AGENCY REFUSES TO GRANT OR GRANTS WITH CONDITIONS A PERMIT UNDER SECTION 39 OF the ACT, THE APPLICANT MAY, WITHIN 35 DAYS, PETITION FOR A HEARING BEFORE THE BOARD TO CONTEST THE DECISION OF THE AGENCY. (Section 40(a)(1) of the Act) The petition must be filed, and the proceeding conducted, pursuant to the procedures of Section 40 of the Act and 35 Ill. Adm. Code 101 and 105.

Section 832.109 Permit No Defense

The issuance and possession of a permit shall not constitute a defense to a violation of the Act or any Board regulations, except for the development and operation of a facility without a permit.

Section 832.110 Term of Permit

No permit issued pursuant to this part shall have a term of more than 5 years.

Section 832.111          Transfer of Permit

A permit may be transferred to a new operator only upon permit modification, pursuant to this Part, to identify the new permittee and incorporate other requirements necessary under the Act. The application must be signed by the existing owner or duly authorized agent of the owner and the new owner and operator or duly authorized agents. The new operator to whom the permit is transferred shall comply with all terms and conditions specified in such permit.

SUBPART B:    ADDITIONAL PROCEDURES FOR MODIFICATION OF PERMITS

Section 832.201          Agency-Initiated Modification of an  
Approved Permit

- a)    The Agency may modify a permit under the following circumstances:
- 1)    Discovery of a typographical, administrative, or calculation error;
  - 2)    Discovery that a determination or condition was based upon false or misleading information;
  - 3)    An order of the Board issued in an action brought pursuant to Title VII, IX or X of the Act; or
  - 4)    Promulgation of new statutes or regulations affecting the permit.
- b)    Modifications initiated by the Agency shall not become effective until 45 days after receipt by the operator, unless stayed during the pendency of an appeal to the Board. The operator may request that the Agency reconsider the modification, or may file a petition for hearing with the Board pursuant to Section 832.108. All other time periods and procedures in 832.202 shall apply.

Section 832.202          Procedures for a Modification of an  
Approved Permit

Applications for modification of an approved permit shall be subject to all requirements and time schedules set forth in this Part.

## SUBPART C: ADDITIONAL PROCEDURES FOR THE RENEWAL OF PERMITS

## Section 832.301 Time of Filing

An application for renewal of a permit must be filed with the Agency at least 90 days prior to the expiration date of the existing permit.

## Section 832.302 Effect of Timely Filing

When a permittee has made timely and sufficient application for the renewal of a permit, the existing permit shall continue in full force and effect until the final Agency decision on the application and any final Board decision on any appeal pursuant to Section 40 have been made, unless a later date is fixed by order of a reviewing court.

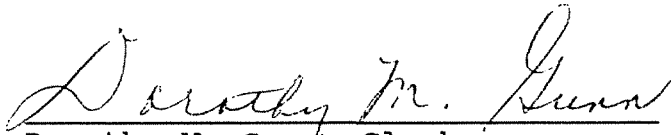
## Section 832.303 Procedures for Permit Renewal

Applications for permit renewal are to be subject to the requirements and time schedules set forth in Subpart A of this Part.

IT IS SO ORDERED.

J. Theodore Meyer dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 15<sup>th</sup> day of September, 1994, by a vote of 5-1.

  
 Dorothy M. Gunn, Clerk  
 Illinois Pollution Control Board