

ILLINOIS POLLUTION CONTROL BOARD  
March 17, 2005

IN THE MATTER OF: )  
)  
RCRA SUBTITLE D UPDATE, USEPA ) R05-1  
REGULATIONS (January 1, 2004, through ) (Identical-in-Substance  
June 30, 2004) ) Rulemaking - Land)

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by G.T. Girard):

This identical-in-substance rulemaking updates the Illinois municipal solid waste landfill (MSWLF) regulations to incorporate revisions to the federal regulations. The United States Environmental Protection Agency (USEPA) undertook the federal amendments that prompted this action during the update period of January 1, 2004 through June 30, 2004.

This proceeding adopts amendments to 35 Ill. Adm. Code 810, 811, and 813. The principal amendments relate to the issuance of temporary research, development, and demonstration (RD&D) permits. Specifically, the RD&D permits allow exceptions to very limited landfill requirements to allow the use of innovative technologies at landfills. The Board's amendments are based on the suggestions made by the Illinois Environmental Protection Agency (Agency) in the Agency's September 2, 2004 public comments. In response to public comments, the Board has concluded that most RD&D issues are appropriately handled by the Agency in the permit process. Board involvement through the adjusted standard process is not necessary due to the performance standards embodied in the RD&D rules. The amendments also make a limited number of non-substantive corrections and stylistic revisions to segments of the text covered by the federal amendments.

Sections 7.2 and 22.40(a) of the Environmental Protection Act (Act) (415 ILCS 5/7.2 and 22.40(a) (2002)) require the Board to adopt amendments to the Illinois regulations that are "identical-in-substance" to MSWLF adopted by the United States Environmental Protection Agency (USEPA). These USEPA rules implement Subtitle D of the Resource Conservation and Recovery Act of 1976, 42 U.S.C §§ 6941-6949 (2003), (RCRA Subtitle D).

Sections 7.2 and 22.40(a) of the Act provides for quick adoption of regulations that are "identical-in-substance" to federal regulations that USEPA adopts to implement Sections 4004 and 4010 of RCRA, 42 U.S.C. §§ 6944 and 6949a (2003). Section 22.40(a) of the Act also provides that Title VII of the Act and Section 5 of the Administrative Procedure Act (APA) (5 ILCS 100/5-35 & 5-40 (2002)) do not apply to the Board's adoption of identical-in-substance regulations. The federal RCRA Subtitle D MSWLF regulations are found at 40 C.F.R. 258.

## **FEDERAL ACTIONS CONSIDERED IN THIS RULEMAKING**

USEPA amended the federal RCRA Subtitle D MSWLF regulations once during the January 1, 2004 through June 30, 2004 period of docket R05-1. That single action is summarized as follows:

69 Fed. Reg. 13242 (March 22, 2004)

USEPA amended the federal rules to allow states to grant research, development, and demonstration permits.

The Board is amending the Illinois regulations to incorporate the single set of federal amendments relating to RD&D permits.

## **PUBLIC COMMENTS**

The Board adopted a proposal for public comment in this matter on January 6, 2005. Notices of Proposed amendments appeared in the January 21, 2005 issue of the *Illinois Register*, at 29 Ill. Reg. 1116 (Part 810), 1133 (Part 811), and 1155 (Part 813). The Board received public comments on this proposal for 45 days following the January 21, 2005 publication, until March 7, 2005. The Board now proceeds to adopt amendments based on that proposal.

Prior to adoption of the January 6, 2005 proposal for public comment, the Board had received one public comment from the Agency, as follows:

PC 1 Comments of the Agency, by Kimberly A. Geving, Assistant Counsel, Division of Legal Counsel, dated August 31, 2004 (received September 2, 2004).

In PC 1, the Agency suggested incorporation of the March 22, 2004 federal RD&D permit amendments into Part 813, the procedural segment of the Illinois landfill regulations, including necessary ancillary amendments to the general requirements of Part 810 and the substantive provisions of Part 811. The Agency provided the Board with suggested text for the amendments.

The Agency comments were instrumental in development of the amendments adopted today. Consideration of the Agency comments is included in the substantive discussion of the amendments that begins on page 3 of this opinion.

During the public comment period, the Board received two more comments. Those comments were the following:

PC 2 Letter by William R. Schubert, P.E., Director-Environmental Engineering, Waste Management, Midwest Group (received February 28, 2005).

PC 3 Comments of Onyx Waste Services, Inc., by B. Todd Watermolen, Vice President, Engineering & Environmental Compliance, Onyx Waste Services, Inc. and Patricia F. Sharkey, Esq., Mayer, Brown, Rowe & Maw (received March 7, 2005).

In PC 2, Waste Management essentially requested that the Board to revise the amendments to allow the Agency to grant RD&D permits without the need for an adjusted standard issued by the Board. In PC 3, Onyx Waste Services, Inc. (Onyx) similarly requested that the Board adopt the amendments as proposed in PC 1 by the Agency, with a single exception: Onyx requested that the Board use the language in the January 6, 2005 proposal for public comment relative to termination of an RD&D permit. Detailed discussion of PC 2 and PC 3 on the RD&D permit rule is included in the segment of this opinion that begins on page 9.

In addition to the public comments submitted, the Board received suggestions from the Joint Committee on Administrative Rules (JCAR). JCAR submitted a document entitled, "Identical Line Numbered Version," which indicated various changes JCAR made to the text of the amendments. Table 4, which begins on page 23 of this opinion, indicates the JCAR suggestions incorporated into the adopted amendments. Table 5, which appears on page 25, indicates the JCAR suggestions not adopted by the Board.

### **TIMETABLE FOR COMPLETION OF THIS RULEMAKING**

Under Section 7.2 of the Act (415 ILCS 5/7.2(b) (2002)), the Board must complete this rulemaking within one year of the date of the earliest set of federal amendments considered in this docket. USEPA adopted the federal amendments that required Board attention on March 22, 2004, so that the deadline for Board adoption of these amendments is March 22, 2005. The Board scheduled adoption of the proposal for public comment for the Board meeting of January 6, 2005, to allow for timely adoption of the rule on March 17, 2005. This will allow filing of these amendments before the March 22, 2005 deadline.

### **DISCUSSION**

The following discussion begins with a description of the types of deviations the Board makes from the literal text of federal regulations in adopting identical-in-substance rules. It is followed by a discussion of the amendments and actions undertaken in direct response to the federal actions involved in this proceeding. This first series of discussions is organized by federal subject matter, generally appearing in chronological order of the relevant *Federal Register* notices involved. Finally, this discussion closes with a description of the amendments and actions that are not directly derived from the federal actions.

#### **Discussion of the Particular Federal Action Involved in This Docket**

#### **Research, Development, and Demonstration Permits--Sections 810.103, 811.103, 811.107, 811.314, Appendix A to Part 811, and 813.112**

The USEPA action of March 22, 2004 (69 Fed. Reg. 13242), related to the use of research, development, and demonstration (RD&D) permits to allow the use of innovative technology and practices at municipal solid waste landfills (MSWLFs). USEPA adopted a new provision at 40 C.F.R. 258.4 to effect this purpose. That new provision allows the states to allow a "variance" from very specific generally applicable requirements:

40 C.F.R. 258.26(a)(1), requiring the control of run-on to the active portion of the landfill from the peak discharge of a 25-year storm event (corresponding with 35 Ill. Adm. Code 811.103(b)(1) and (b)(2) of the Illinois regulations);

40 C.F.R. 258.28(a), prohibiting the placement of bulk or noncontainerized liquid waste in a landfill except under very limited circumstances (corresponding with 35 Ill. Adm. Code 811.107(m)(1) of the Illinois regulations); and

40 C.F.R. 258.60(a)(1), (a)(2), and (b)(1), requiring the use of a final cover system that minimizes erosion and infiltration into a landfill, which includes specific requirements pertaining to such criteria as permeability, thickness of each layer, and the ability of the cover material to sustain native plant growth (corresponding with 35 Ill. Adm. Code 811.314(a) through (c) of the Illinois regulations).

**Bioreactor Landfills Explained.** The purpose of the federal amendments is to allow the operation of bioreactor landfills. A conventional landfill is designed to lessen the potential for groundwater contamination by minimizing the infiltration of rainwater, restricting the placement of liquid wastes in the landfill, and minimizing the hydraulic head on the bottom liner to minimize percolation of contaminated leachate into the ground. As USEPA explains in the preamble discussion of the federal amendments, a bioreactor landfill takes a different approach in order to more rapidly stabilize the landfill:

*Bioreactor* means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste. 69 Fed. Reg. 13242, 13246 (Mar. 22, 2004) (quoting the definition of “bioreactor” in the national emission standards for hazardous air pollutants (NESHAPs) rule in Subpart AAAA of 40 C.F.R. 63 (2003)).

The generally-applicable federal landfill management requirements act as restrictions on the ability to operate a bioreactor landfill. The operation of a bioreactor landfill requires the reintroduction of contaminated liquid to the waste in the landfill, which is not allowed under the requirements of 40 C.F.R. 258.26(a)(1), 258.28(a), and 258.60(a)(1), (a)(2), and (b)(1) (corresponding with 35 Ill. Adm. Code 811.103(b)(1) and (b)(2), 811.107(m)(1), and 811.314(a) through (c) of the Illinois regulations). The RD&D permit rule would allow relief from these rules to permit the experimental operation of a bioreactor landfill.

**RD&D Permit Limitations.** Under the new federal provision, certain limitations apply to the availability of an RD&D permit. To obtain an RD&D permit that allows alternative practices to the generally applicable run-on control system requirements and/or the prohibition against placement of bulk or noncontainerized liquids, the applicant must design and construct the landfill’s leachate collection system so as to maintain less than a 30-centimeter (cm) leachate depth on the bottom liner of the landfill. To obtain an RD&D permit that allows the use of

alternative practices to the generally applicable final cover requirements, the owner or operator must demonstrate that infiltration of liquid through the alternative cover will not cause contamination of groundwater or surface water or cause the leachate depth on the liner to exceed 30 cm. In issuing an RD&D permit the Agency must include whatever terms and conditions are necessary “to assure protection of human health and the environment.” See 40 C.F.R. 258.4(c) (2004).

**Agency Suggestions in PC 1.** In PC 1, the Agency suggested specific language by which to incorporate the federal RD&D permit amendments into the Illinois regulations. The Board received the Agency comments early in the development of the proposal for public comment. Thus, the Agency suggestions received significant consideration as the Board reviewed the federal RD&D amendments. While the federal amendments are the basis for the amendments adopted by the Board today, the Agency suggestions in PC 1 proved instrumental in development of the amendments. For this reason, the following discussion indicates not only where the amendments differ from the federal RD&D rule, it further indicates where the Board has incorporated Agency-suggested amendments or declined to do so.

The main segment of the Agency-suggested amendments follows the text of new 40 C.F.R. 158.4 very closely. The Agency suggested codifying the federally-derived text as new Section 813.601 in a new Subpart F to Part 813. The Agency also suggested ancillary amendments to add clarity to the text of Part 811 and facilitate implementation of the RD&D permit amendments. The Agency recommended adding a definition of “research, development, and demonstration permit” in the general definitions of Section 810.103. The Agency further recommended adding language that describes the availability of an RD&D permit at the three locations in the rules from which relief may be granted: at Section 811.103(b)(1) and (b)(2), at Section 811,107(m)(1), and at Section 811.314(a). A final Agency suggestion that adds to the literal text of the federal amendments is the addition of language relating to RD&D permits at the description of the scope of Part 813 at Section 813.101(a).

**The Board’s January 6, 2005 Proposal.** In incorporating the March 22, 2004 federal amendments into the January 6, 2005 proposal for public comment, the Board incorporated the suggestions submitted by the Agency in PC 1 to the extent the Board thought practicable at that time. There are two principal aspects of the Agency suggestions that the Board has followed: (1) the proposal followed the language and structure of the federal amendments as closely as possible; and (2) the proposal included ancillary amendments needed to add clarity to the substantive provisions from which alternative practices are now allowed and to enhance implementation of the rules. The Board believed it was unable to follow the Agency recommendations in several ways, however, since it is necessary to accommodate the differences between the federal and Illinois regulatory schemes. The functions of the Board and the Agency are each narrowly under the Act. Other revisions to the federal language and Agency suggestions not followed are intended to enhance their clarity. The table that begins on page 13 of this opinion itemizes the various revisions made to the federal text in adapting it into the State regulations. The table that begins on page 16 itemizes the various Agency suggestions not adhered to by the Board while developing the proposal.

The most significant departure from the text of the federal RD&D rule was the inclusion of amendments to ancillary segments of the substantive regulations. This is based on the Agency suggestions in PC 1. The first was the addition of the suggested definition of “research, development, and demonstration permit.” The second was the addition of language that indicates the availability of an RD&D permit for relief from the generally-applicable requirements. A third was the addition of the language relating to RD&D permits in the statement of the scope of Part 813. Other changes in the federal text were not based on the Agency-suggested amendments. Those changes were, in fact, differences between the amendments proposed by the Board and those suggested by the Agency.

One significant difference between the Agency-suggested amendments of PC 1 and the proposal adopted by the Board on January 6, 2005, was that the Board added the substance of 40 C.F.R. 258.4 to the Illinois rules as a new Section 813.112 in the general provisions of Part 813, and not as a new Section 813.601 of a new Subpart F of that Part. The Board believed that placement in the general provisions of Part 813 more closely follows the existing structure of that Part, and it avoids conferring a special status on the RD&D permit provision, which might occur were the Board to place the provision alone in a new Subpart F.

A second significant difference between the Agency-suggested amendments and those of the January 6, 2005 proposal related to termination of practices under the RD&D permit if something goes wrong. The Agency-suggested amendments would have allowed the Agency to terminate operation under an RD&D permit if the objectives of the permit are not being fulfilled, including protection of human health and the environment. In Illinois, only the Board has authority to terminate a permit, and then only after an enforcement action, with the opportunities for notice and public hearing.<sup>1</sup> *See* 415 ILCS 5/33(b) (2002). For this reason, the Board structured Section 813.112(d) (corresponding with 40 C.F.R. 258.4(d)) to allow the Agency to request immediate termination of operations under the permit. Permit termination requires the Agency or the Attorney General to file an enforcement action to obtain a Board order for termination of operations.

The third significant difference between the Agency-suggested amendments and those proposed by the Board on January 6, 2005 related to the differences in functions between the Board and the Agency. Incorporation of the federal RD&D permit provision into the Illinois regulations raises important issues relating to the unique structure of the Illinois regulatory scheme. The Act divides the responsibilities relating to environmental standards in Illinois between the Board and the Agency. Among other responsibilities, the Agency implements the State standards and issues permits. *See* 415 ILCS 4 and 39. It is the Board that establishes the State standards by regulation and grants relief from those regulations by issuing adjusted standards or variances. *See* 415 ILCS 5/5, 28.2, and 35. USEPA characterized an RD&D permit as conferring a “variance” from the generally-applicable federal standards for MSWLF units. *See* 69 Fed. Reg. 13242-53 (Mar. 22, 2004) (95 occurrences preamble summary and discussion); 40 C.F.R. 258.4(f) (2004).

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<sup>1</sup> The Agency may seal any equipment or facility that it finds contributing to an emergency condition, that that action requires an Agency finding that an emergency condition exists. 415 ILCS 5/34 (2002).

The Board determined when proposing the amendments for public comment on January 6, 2005 that the RD&D permit determination was beyond the outer boundary of the decision-making authority that could be conferred on the Agency by regulation. The Board noted that in the existing rules, the Board through the adjusted standard procedure must authorize “experimental practices.” 35 Ill. Adm. Code 813.110. Similarly, use of alternative standards and procedures in various specific areas must also be Board-authorized by adjusted standards. *See, e.g.*, 35 Ill. Adm. Code 811.106(c) (daily cover), 811.310(e) (frequency of landfill gas monitoring), and 811.314(d) (infiltration barrier for the final cover system). Those determinations that the regulations provide are made by the Agency as a permit determination to allow alternative materials or practices contain sufficient standards for performance of the alternatives. *See, e.g.*, 35 Ill. Adm. Code 811.106(b) (alternative daily cover materials and procedures allowed if equivalent or superior to 0.15 meter of clean soil) and 811.314(b)(4)(C) (alternative low-permeability layer techniques or materials if equivalent to or superior to three feet of compacted earth having a permeability less than  $1 \times 10^{-7}$  centimeters per second).

The Board stated in the January 6, 2005 proposed opinion and order that the standards for Agency decision-making contained in the RD&D permit rules were too nebulous. There are two basic standards for the RD&D permit determination under the federal rule. The first is an engineering judgment of a type routinely made by the Agency: that the landfill has a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate on the bottom liner of the landfill. 40 C.F.R. 258.4(a) and (b) (2004). It is the second standard for the RD&D permit determination that the Board found problematic: that the RD&D permit impose operational standards that are “at least as protective as the criteria for municipal solid waste landfills to assure protection of human health and the environment.” 40 C.F.R. 258.4(c) (2004).

The Board further observed in the proposed opinion that there is one factor other than the four cited above that the Board must consider when determining the general division of authority between the Agency and the Board. In fact, that factor underlies the rulemaking process through which the generally applicable State standards are established, the procedures by which the Board establishes exceptions to general requirements,<sup>2</sup> and those through which a Board order could affect the scope or content of any particular permit.<sup>3</sup> That factor is whether the particular exercise of judgment would benefit through a record developed through the notice and opportunity for public hearing requirements that underlie every Board decision-making procedure. *See* 415 ILCS 5/27(b), 28(a), 28.1(d), 31(c), 33(a), 37(a), and 40(a). A determination based on a nebulous standard is best made based on a full record developed with the benefits of notice and opportunity for public hearing.

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<sup>2</sup> The adjusted standard procedure, under Section 28.1 of the Act; the procedure for adopting a site-specific rule, under Sections 27 and 28 of the Act; or the procedure for granting a variance, under Sections 35 through 38 of the Act.

<sup>3</sup> Such an order might include one issued in a permit appeal, under Section 40 of the Act, or a cease and desist order issued in an enforcement action, under Section 42 of the Act.

The Board concluded that, thus, the decision whether to allow the proposed alternative practices that would underlie an RD&D permit is best made by the Board with the benefits of a record assembled using the adjusted standard procedure. The proposed amendments were drafted to use the federally prescribed standards as the basis for a Board determination whether to allow the use of any alternative practices. *See* 415 ILCS 5.28.1(b) (2002). The Board requested public comment on the incorporation of the March 22, 2004 federal RD&D permit amendments into the Illinois landfill regulations. The Board specifically requested comments on the following: (1) rendering the decision to allow alternative practices that the Agency could allow in an RD&D permits as an adjusted standard determination, as set forth in the proposed amendments; and (2) providing that the mechanism of an enforcement action for Board termination of operations under the RD&D permit is appropriate in the event the objectives of the permit are not achieved.

**Public Comments.** The Board received PC 2, from Waste Management, and PC 3, from Onyx Waste Services, Inc. Both made significant comments on the proposal and each requested that the Board modify the amendments on adoption to more closely follow the language proposed by the Agency in PC 1. The Board appreciates the input from both commenters. Onyx's comments were particularly helpful in their detail.

In PC 2, Waste Management stated that it does not support the amendments as proposed. Waste Management requested that the amendments "provide a simple permitting mechanism for these alternate technologies." PC 2. Thus, Waste Management asked the Board to revise the amendments to allow the Agency to grant RD&D permits without the need for an adjusted standard issued by the Board. Waste Management commented that requiring the landfill to obtain an adjusted standard from the Board before issuance of an RD&D permit "does not provide any additional capability than what is already provided in the current system." PC 2. Waste Management asserted that the existing regulations would allow the same relief from the standards of Sections 811.103(b)(1) and (b)(2), 811.107(m)(1), and 811.314(a) through (c) as is presently available under the existing regulations.

In PC 3, Onyx Waste Services, Inc. (Onyx) similarly commented, "bifurcation of the decision-making is not required by the division of authority under the Act." PC 3 at 21. Onyx requested that the Board adopt the amendments as proposed in PC 1 by the Agency, with a single exception: Onyx agreed that the Agency lacks the authority to terminate a permit, so Onyx requested that the Board use the language included in the January 6, 2005 proposal for public comment on this point.

Onyx stated that it owns and operates three landfills in Illinois that are candidates for operation as bioreactor landfills, including one for which it has received a National Science Foundation grant to study liquids addition to the fill. PC 3 at 1. Onyx asserted that its three landfills are presently allowed to recirculate leachate, but that this practice does not introduce enough liquid to the fill to stimulate rapid decomposition of waste in the fill. The owner or operator must be permitted to add liquids other than leachate to the fill, to use a cap that allows greater infiltration, and to allow controlled run-on of stormwater. PC 3 at 3. Onyx said that the conditions of weather, geology, and waste composition in Illinois make it necessary to fully implement the federal RD&D permit rule to operate a landfill as a bioreactor landfill. Onyx



asserted that an RD&D permit to allow operation of a landfill as a bioreactor landfill would result in an enhanced stabilization rate for the fill. PC 3 at 2.

Onyx maintained that it is necessary to streamline the permitting process to implement the bioreactor technology as quickly as possible in Illinois. PC 3 at 2. Onyx believed that the amendments embodied in the January 6, 2005 proposal that would have required an owner or operator to first obtain an adjusted standard before seeking an RD&D permit would have acted as an unnecessary serious impediment or obstacle to the use of bioreactor landfill technology. PC 3 at 3 and 12. Onyx further asserted that a scheme in which the owner or operator must first obtain an adjusted standard before obtaining a permit will not work. PC 3 at 13.

Onyx asserted that the justifications put forward by the Board for requiring the owner or operator to obtain an adjusted standard are weak with regard to an RD&D permit. Onyx contended that (1) the RD&D permit determination is a fact-based technical determination of a nature routinely made by the Agency (PC 3 at 15-16), (2) the RD&D rule contains sufficient standards for Agency decision making (PC 3 at 15-17), and (3) the permitting process itself includes requirements for public notice, comment, and opportunity for public hearing (PC 3 at 14). Onyx maintained that the fact that infiltration from the landfill would not cause groundwater contamination is a technical demonstration that the Agency can review. PC 3 at 16. Similarly, Onyx stated that an RD&D permit determination would require an owner or operator to provide the Agency with detailed engineering information and environmental impact data. The detail of the technical submission would be sufficient to make the determination whether the alternative practices would provide equivalent protection of human health and the environment an objective, technical determination. Onyx maintained that the Agency is fully equipped to make such an objective, technical determination. PC 3 at 17-18.

Finally, Onyx requested that the Board revise the proposed definition of “research, development, and demonstration permit” in Section 810.103. Onyx stated, “If the Board believes it is necessary to include a definition . . . it should simply refer to permits issued under the section containing the RD&D requirements.” PC 3 at 21. The definition added to Section 810.103 in the January 6, 2005 proposal for public comment reads as follows:

“Research, development, and demonstration permit” or “RD&D permit” means a permit issued pursuant to an adjusted standard issued under 35 Ill. Adm. Code 813.112, as derived from 40 CFR 258.4 (2004), that allows the testing of an innovative technology at an MSWLF unit.

Thus, it would appear that Onyx wishes the Board to remove the parenthetical “as derived from 40 CFR 258.4 (2004),” and the restrictive relative clause, “that allows the testing of an innovative technology at an MSWLF unit.”

Onyx concluded, “Onyx recommends that the Board adopt the RD&D rule as proposed by the Agency in its August 31, 2004 comment, with the exception of the termination provision.” PC 3 at 22.

**Board Responses to Public Comments.** After review of the thoughtful public comments received, the Board is now convinced that it is appropriate to remove the provisions relating to adjusted standards from the adopted rule. The Board concludes that the determinations necessary to allow the limited alternative practices provided in the RD&D rule are technical determinations of a nature routinely made by the Agency. As such, the limited determinations under the rule do not rise to the level of allowing the Agency to establish or grant deviation from the State landfill standards. The Board is now convinced that the RD&D rule provides sufficient guidance for Agency decision making within the frame of the existing rules. Further, the permit process provides sufficient opportunity for public notice, comment, and opportunity for public hearing.

Onyx has persuaded the Board to revise the proposed amendments based on two points raised: (1) issuance of an RD&D permit engages a new alternative performance-oriented standard, rather than grants relief from an existing regulatory standard, and (2) a determination to issue an RD&D permit is an exercise of engineering judgment that the Act charges to the Agency. Onyx has further convinced the Board to remove the clause “an adjusted standard issued under”; the parenthetical “as derived from 40 CFR 258.4 (2004)”; and the restrictive relative clause, “that allows the testing of an innovative technology at an MSWLF unit,” that were added to the definition of “research, development, and demonstration permit” in Section 810.103. The Board will remark, however, on certain aspects of Onyx’s comments.

First, Onyx presents much information on the technical merits of bioreactor landfill technology and on the process by which USEPA determined to allow the states to issue RD&D permits. PC 3 at 4-10. The Board reminds commenters that it cannot revisit the technical merits of a federal rule in the context of an identical-in-substance proceeding.

Second, Onyx asserted that the adjusted procedure would inordinately burden the process for obtaining an RD&D permit. Onyx drew a parallel between obtaining an approval for an RD&D permit under the federal scheme, which has assertedly allowed the approval of four bioreactor landfills in 19 years, and an approval by Board adjusted standard, which assertedly “are rarely finalized in less than eight months.” PC 3 at 10-12. The Board believes that Onyx miscasts the issue. The issue is not how rapidly relief can be sought. Rather, the real issue is what is the appropriate means for making the particular decision within the context of the Illinois regulatory scheme. The General Assembly in the Environmental Protection Act has specified the means for decisionmaking based on the nature of the decision being made. If it is necessary under the Act to use the adjusted standard procedure, it is also necessary to take whatever time may be needed to follow that procedure.

In summary, in the January 6, 2005 proposal for public comment, the Board determined that the regulatory criteria for decision making in the context of an RD&D permit were too nebulous to commit to a permit determination. After reviewing the public comments, the Board now concludes that this is not so. The RD&D rule includes sufficient criteria for decision-making. The determinations that would underlie the issuance of an RD&D permit would impose an alternative performance-oriented standard. The derivation of permit conditions based on this alternative performance-oriented standard is sufficiently narrow that it constitutes an engineering judgment which is best conferred on the Agency.

**The Adopted RD&D Rule.** The RD&D rule adopted today is similar to that proposed on January 6, 2005. The Board has retained the minor corrections added to the federal text and the proposal submitted by the Agency in PC 1. The Board also kept the Section numbering as included in the proposal for public comment. The Board has further retained the provision that the Agency may request that the owner or operator cease operation under the permit or file an enforcement action seeking Board termination of the permit.

What has changed is that the adopted rule does not require an adjusted standard to obtain an RD&D permit.

The Board has made the following revisions to the text of the amendments to remove references to obtaining an adjusted standard: (1) the Board removed “an adjusted standard issued under” from the Section 810.103 definition of “research, development, and demonstration permit” and from Sections 811.103(b)(1) and (b)(2) and 811.107(m)(1)(C); (2) the Board removed the preamble to new Section 813.112; and (3) the Board changed “the Board has determined by an adjusted standard . . . that,” in Section 813.112(a) and (b), to “the Agency has determined that.” Further, the Board deleted the parenthetical and the restrictive relative clause that formerly appeared in the proposed definition of “research, development, and demonstration permit” in Section 810.103.

Table 4, which begins on page 23 of this opinion and order, summarily lists the various revisions made to the text of the adopted amendments. The table indicates the segment of the rules affected, the source of the suggested change, and a brief description of the change.

### **General Revisions and Deviations from the Federal Text**

In incorporating the federal rules into the Illinois system, some deviation from the federal text is unavoidable. This deviation arises primarily through differences between the federal and state regulatory structure and systems. Some deviation also arises through errors in and problems with the federal text itself. The Board conforms the federal text to the Illinois rules and regulatory scheme and corrects errors that we see in the text as we engage in these routine update rulemakings.

In addition to the amendments derived from federal amendments, the Board often finds it necessary to alter the text of various passages of the existing rules as provisions are opened for update in response to USEPA actions. This involves correcting deficiencies, clarifying provisions, and making other changes that are necessary to establish a clear set of rules that closely parallel the corresponding federal requirements within the codification scheme of the *Illinois Administrative Code*.

The Board updates the citations to the *Code of Federal Regulations* to the most recent version available. As of the date of this opinion, the most recent version of the *Code of Federal Regulations* available to the Board is the July 1, 2004 version. Thus, we have updated all citations to the 2004 version, adding references to later amendments using their appropriate *Federal Register* citation, where necessary.

The Board substituted “or” for “/” in most instances where this appeared in the federal base text, using “and” where more appropriate. The Board further used this opportunity to make a number of corrections to punctuation, grammar, spelling, and cross-reference format throughout the opened text. We changed “who” to “that” and “he” or “she” to “it,” where the person to which the regulation referred was not necessarily a natural person, or to “he or she,” where a natural person was evident; changed “which” to “that” for restrictive relative clauses; substituted “must” for “shall”; capitalized the section headings and corrected their format where necessary; and corrected punctuation within sentences.

In addition, the federal rules have been edited to establish a uniform usage throughout the Board’s regulations. For example, with respect to “shall,” “will,” and “may,” “must” is used when an action is required by the rule, without regard to whether the action is required of the subject of the sentence or not. “Shall” is no longer used, since it is not used in everyday language. Thus, where a federal rule uses “shall,” the Board substitutes “must.” This is a break from our former practice where “shall” was used when the subject of a sentence has a duty to do something. “Will” is used when the Board obliges itself to do something. “May” is used when choice of a provision is optional. “Or” is used rather than “and/or,” and denotes “one or both.” “Either . . . or” denotes “one but not both.” “And” denotes “both.”

The Joint Committee on Administrative Rules (JCAR) has requested that the Board refer to the United States Environmental Protection Agency in the same manner throughout all of our bodies of regulations—*i.e.*, air, water, drinking water, RCRA Subtitle D (municipal solid waste landfill), RCRA Subtitle C (hazardous waste), underground injection control (UIC), etc. The Board has decided to refer to the United States Environmental Protection Agency as “USEPA.” We will continue this conversion in future rulemakings as additional sections become open to amendment. We will further convert “EPA” used in federal text to “USEPA,” where USEPA is clearly intended.

The Board has assembled tables to aid in the location of these alterations and to briefly outline their intended purpose. The tables set forth the miscellaneous deviations from the federal text and corrections to the pre-amended base text of the rules in detail. The tables are set forth and explained immediately below this opinion. There is no further discussion of most of the deviations and revisions elsewhere in this opinion.

### **Discussion of Miscellaneous Housekeeping Amendments**

The tables below list numerous corrections and amendments that are not based on current federal amendments. The first table (beginning immediately below) includes deviations made in the adopted amendments from the verbatim text of the federal amendments. The second table (beginning below at page 16) the Board’s disposition of the Agency-suggested amendments. That second table indicates how the amendments as adopted differ from the text as suggested by the Agency. The third table (beginning at page 18) contains corrections and clarifications that the Board made in the base text involved in the adopted amendments. The amendments listed in this second table are not directly derived from the current federal amendments. Table 4 (beginning on page 23 below) is a listing of revisions made to the text of the amendments from

that proposed and set forth in the Board’s opinion and order of December 16, 2005. Table 4 indicates the changes made, as well as the source that suggested each of the changes. Table 5 (on page 25 below) indicates suggested revisions (other than those of the Agency, which are included in table 2) that the Board has not made in adopting these amendments. Each entry gives a brief explanation why the Board did not incorporate the suggested change. Some of the entries in these tables are discussed further in appropriate segments of the general discussion beginning at page 3 of this opinion.

**Table 1:  
Deviations from the Text of the Federal Amendments**

Illinois Section	40 C.F.R. Section	Revision(s)
810.103 “research, development, and demonstration permit”	None	Added the definition
811.103(b)(1)	None	Added “or unless . . . is in effect”
811.103(b)(2)	None	Added “unless . . . is in effect” offset by a comma
811.103 Board note	None	Added the Board note citing the source of subsections (b)(1) and (b)(2)
811.107(m)(1)(C)	None	Added the exception for where the Agency has issued an RD&D permit
811.314(a)	None	Added the exception for where the Agency has issued an RD&D permit
811.Appendix B, ¶I. 3)	None	Added citation to Illinois provisions that correspond with 40 CFR 258.4
813.112(a)	258.4(a)	Changed “paragraph (f) of this section” to “subsection (f) of this Section”; added “and subject to . . . this Section” as a parenthetical offset by a comma; changed “Director of an approved state” to “Agency”; changed “may” to “must”; added the abbreviated form in parentheses “(RD&D)”; changed "which" to "that" for a restrictive relative clause; changed “vary” to “deviate”; changed “criteria” to “standards”; added “the Agency has determined”; added “that is” before “designed and constructed” for a restrictive relative clause; added “and that the . . . surface water”
813.112(a)(1)	258.4(a)(1)	Changed “§ 258.26(a)(1)” to “35 Ill. Adm. Code 811.103(b)(1) and (b)(2)”
813.112(a)(2)	258.4(a)(2)	Changed “§ 258.28(a)” to “35 Ill. Adm. Code 811.107(m)(1)”

813.112(b)	258.4(b)	Changed “Director of an approved State” to “Agency”; changed “may” to “must”; changed "which" to "that" for a restrictive relative clause; changed “vary” to “deviate”; changed “criteria” to “standards”; changed “§ 258.60(a)(1), (a)(2) and (b)(1)” to “35 Ill. Adm. Code 811.314(b) and (c)”; added “the Agency has determined that”; changed “demonstrates” to “has demonstrated”; removed the unnecessary comma after “surface water” that separated a two-element series
813.112(c)	258.4(c)	Added “RD&D” before “permit”; changed “this section” to capitalized “this Section”; added “as are” before “at least as protective”; changed “criteria for municipal solid waste landfills” to “MSWLF standards of . . . from which the deviation is granted”; changed “permits” to singular “a permit”; changed "shall" to "must"; added “include the following conditions”
813.112(c)(1)	258.4(c)(1)	Added “it must”; added “are” before “necessary”; added “the permit is” before “renewed”; changed “paragraph (e) of this section” to “subsection (e) of this Section”
813.112(c)(2)	258.4(c)(2)	Added “it must”; changed "which" to "that" for a restrictive relative clause; changed “State Director” to “Agency”; added “are” before “necessary”; added “the permit is” before “renewed”; changed “paragraph (e) of this section” to “subsection (e) of this Section”; changed “deems” to “has deemed”
813.112(c)(3)	258.4(c)(3)	Added “it must”; added “are” before “necessary” (twice); changed “State Director” to “Agency”
813.112(c)(4)	258.4(c)(4)	Added “it must”; changed “this section” to capitalized “this Section”; changed “State Director” to “Agency” (twice)
813.112(c)(5)	258.4(c)(5)	Added “it must”; changed “criteria” to “standards”; changed “this part” to “35 Ill. Adm. Code 811”; changed “this section” to capitalized “this Section”

813.112(d)	258.4(d)	Changed “Director of an approved State” to “Agency”; changed “may order an immediate termination of” to “request in writing . . . immediately terminate”; changed “allowed” to “permitted”; changed “this section” to capitalized “this Section”; added “request that . . . undertake” before “other corrective measures”; changed “State Director” to “Agency”; changed “determines” to “has reason to believe”; added “The Agency or any person . . . violations of the Act [415 ILCS 5].”
813.112(e)	258.4(e)	Changed “any . . . shall not” to “no . . . may”; added “in duration” after “three years” (twice); changed “each renewal . . . may not” to “no single . . . may”
813.112(e)(2)	258.4(e)(2)	Changed “shall” to “must”; changed “Director” to “Agency”; added “are” before “necessary”
813.112(f)	258.4(f)	Changed the colon after “small MSWLF units” to a period; removed subsection (f)(1) relating to an exemption under 40 C.F.R. 258.1(f)(1); changed “an exemption from” to “and RD&D permit . . . standards of”; changed “§ 258.60(b)(1)” to “35 Ill. Adm. Code 811.314(b) and (c)”; changed “§ 258.60(b)(3)” to “35 Ill. Adm. Code 811.314(d)”

**Table 2:  
Differences between the Proposed Amendments and Those Suggested by the Agency**

Section	Difference(s)
810.103 “research, development, and demonstration permit”	Changed “813.601” to “813.112”; removed “as consistent with 40 CFR Part 258.4 (2004), as added at 69 FR 13255 (Mar. 22, 2004)”; changed “Unit” to lower-case “unit”
811.103(b)(1)	Removed the comma from before “or unless” that separated a two-element series; changed “a research, development, or demonstration permit has been obtained” to “the Agency has issued a research, development, or demonstration (RD&D) permit that provides otherwise . . . relating to run-on control systems”; removed the unnecessary comma from before “pursuant to”; changed “813.601” to “813.112(a)(1)”; added “that permit” before “is in effect”

811.103(b)(2)	Added a comma before “unless” to offset the parenthetical; changed “a research, development, or demonstration permit has been obtained” to “the Agency has issued an RD&D permit that provides otherwise . . . relating to run-on control systems”; removed the unnecessary comma from before “pursuant to”; changed “813.601” to “813.112(a)(1)”; added “that permit” before “is in effect”
811.103 Board note	Changed “the closing phrases in Subsections 811.103(b)(1) and (2)” to “those segments of subsections (b)(1) and (b)(2) of this Section”; changed “regarding research, development, and demonstration permits” to “that relate to RD&D permits”; removed the preceding comma and changed “accommodates the provisions of 40 CFR 258.4, as added at 69 FR 13255 (Mar. 22, 2004)” to “are derived from 40 CFR 258.4(a)(1) (2004)”
811.107(m) Board note	Changed “subsection 811.107(m)(1)(C)” to “subsection (m)(1)(C) of this Section”; changed accommodates the research, development and demonstration permit provisions of 40 CFR 258.4, as added at 69 FR 13255 (Mar. 22, 2004)” to “are derived from 40 CFR 258.4(a)(1) (2004)”
811.314(a)	Changed “unless . . . has been obtained” to active-voice “unless the Agency has issued . . .”; changed “a research, development and demonstration permit” to “an RD&D permit”; changed “innovative and new” to “innovative”; removed the commas before and after “final cover technology”; changed “pursuant to” to “an adjusted standard issued under”; changed “813.601” to “813.112(b)”; added “that permit” before “is in effect”
813 table of contents, 813.112 heading	Changed “813.601” to “813.112”; changed “development, and demonstration permits” to capitalized “Development, and Demonstration Permits”; added “for MSWLFs”
813.101(a)	Changed “a research, development and demonstration permit” to “an RD&D permit”
813.112 heading	Changed “813.601” to “813.112”; changed “development, and demonstration permits” to capitalized “Development, and Demonstration Permits”; added “for MSWLFs”
813.112(a)	Changed “paragraph (f) of this section” to “subsection (f) of this Section”; added “and subject to the limitations of subsections (c) through (e) of this Section” as a parenthetical offset by a comma; changed “may” to “must” added the abbreviated form in parentheses “(RD&D)”; changed “which” to “that” for a restrictive relative clause; changed “vary” to “deviate”; changed “criteria” to “standards”; added “the Agency has determined”; added “that is” before “designed and constructed” for a restrictive relative clause; added “and that the . . . surface water”
813.112(a)(1)	Changed “811.103(b)(1) and (2)” to “811.103(b)(1) and (b)(2)”
813.112(a)(2)	Changed “811.107(m)” to “811.107(m)(1)”



813.112(b)	Changed “may” to “must”; changed "which" to "that" for a restrictive relative clause; changed “vary” to “deviate”; changed “criteria” to “standards”; added “the Agency has determined that”; changed “demonstrates” to “has demonstrated”; removed the unnecessary comma after “surface water” that separated a two-element series
813.112(c)	Added “RD&D” before “permit”; changed “this section” to capitalized “this Section”; added “as are” before “at least as protective”; changed “criteria for municipal solid waste landfills” to “MSWLF standards of . . . from which the deviation is granted”; changed “permits” to singular “a permit”; changed "shall" to "must"; added “include the following conditions”
813.112(c)(1)	Added “it must”; added “are” before “necessary”; added “the permit is” before “renewed”; changed “paragraph (e) of this section” to “subsection (e) of this Section”
813.112(c)(2)	Added “it must”; added “are” before “necessary”; added “the permit is” before “renewed”; changed “paragraph (e) of this section” to “subsection (e) of this Section”; changed “deems” to “has deemed”
813.112(c)(3)	Added “it must”; added “are” before “necessary” (twice)
813.112(c)(4)	Added “it must”; changed “this section” to capitalized “this Section”
813.112(c)(5)	Added “it must”; changed “criteria” to “standards”; changed “this part” to “35 Ill. Adm. Code 811”; changed “this section” to capitalized “this Section”
813.112(d)	Changed “may order an immediate termination of” to “request in writing . . . immediately terminate”; changed “allowed” to “permitted”; changed “this section” to capitalized “this Section”; added “request that . . . undertake” before “other corrective measures”; changed “determines” to “has reason to believe”; added “The Agency or any person . . . violations of the Act [415 ILCS 5].”
813.112(e)	Changed “any . . . shall not” to “no . . . may”; added “in duration” after “three years” (twice); changed “each renewal . . . may not” to “no single . . . may”
813.112(e)(2)	Changed "shall" to "must"; added “are” before “necessary”
813.112(f)	Changed the colon after “small MSWLF units” to a period; changed “an exemption from” to “and RD&D permit . . . standards of”
813.112 Board note	Changed “Section 813.601” to “this Section”; removed the unnecessary <i>Federal Register</i> citation “as added at 69 FR 13255 (Mar. 22, 2004)”

**Table 3:  
Board Housekeeping Amendments**

Section	Source(s)	Revision(s)
810.103 “Agency”	Board	Changed the format of the statutory citation “(Section 3.105 of the Act)” to “[415 ILCS 5/3.105]”

810.103 “Board”	Board	Changed the format of the statutory citation “(Section 3.130 of the Act)” to “[415 ILCS 5/3.130]”
810.103 “disposal”	Board	Changed the format of the statutory citation “(Section 3.185 of the Act)” to “[415 ILCS 5/3.185]”
810.103 “existing MSWLF facility”	Board	Changed the format of the statutory citation “(Section 3.285 of the Act)” to “[415 ILCS 5/3.285]”
810.103 “facility”	Board	Added a comma after “storage” to offset the final element of a series
810.103 “household waste”	Board	Changed the format of the statutory citation “(Section 3.230 of the Act)” to “[415 ILCS 5/3.230]”
810.103 “hydraulic barriers”	Board	Added a comma after “grout curtains” to offset the final element of a series
810.103 “lateral expansion”	Board	Changed the format of the statutory citation “(Section 3.275 of the Act)” to “[415 ILCS 5/3.275]”
810.103 “malodor”	Board	Changed the format of the statutory citation “(Section 3.115 of the Act)” to “[415 ILCS 5/3.115]”
810.103 “municipal solid waste landfill”	Board	Changed the format of the statutory citation “(Section 3.285 of the Act)” to “[415 ILCS 5/3.285]”
810.103 “National Pollutant Discharge Elimination System”	Board	Added the statutory citation “[415 ILCS 5/12(f)]”
810.103 “new facility”	Board	Added the statutory citation “[415 ILCS 5/12(d)]” (twice)
810.103 “new MSWLF facility”	Board	Changed the format of the statutory citation “(Section 3.285 of the Act)” to “[415 ILCS 5/3.285]”
810.103 “one hundred-year flood plain”	JCAR	Changed “hundred” to “hundred-year” to reflect text on file
810.103 “one hundred-year, 24-hour precipitation event”	JCAR	Changed “hundred” to “hundred-year” to reflect text on file
810.103 “person”	Board	Changed the format of the statutory citation “(Section 3.315 of the Act)” to “[415 ILCS 5/3.315]”
810.103 “Resource Conservation and Recovery Act”	Board	Changed the format of the statutory citation “(Section 3.425 of the Act)” to “[415 ILCS 5/3.425]”
810.103 “significant modification”	Board	Added the statutory citation “[415 ILCS 5/39]”
810.103 “special waste”	Board	Added the statutory citation “[415 ILCS 5/22.9]”; changed the format of the statutory citation “(Section 3.475 of the Act)” to “[415 ILCS 5/3.475]”
811.103(a)	Board	Added ending period
811.103(a)(1)	Board	Changed “shall” to “must”
811.103(a)(2)	Board	Changed “shall” to “must”
811.103(a)(3)	Board	Changed “shall” to “must”
811.103(a)(4)	Board	Changed “shall” to “must”

811.103(a)(5)	Board	Changed “shall” to “must”; corrected the spelling of “contracted” to “constructed”; added a comma after “i.e.”
811.103(b)(1)	Board	Changed “shall” to “must”; added a comma after “unless” to offset the parenthetical
811.103(b)(3)	Board	Changed “which” to “that” for a restrictive relative clause; changed “shall” to “must”; changed "subsection (a)" to "subsection (a) of this Section"
811.103(b)(4)	Board	Changed "shall" to "must"; added a comma after “i.e.”
811.103(b)(5)	Board	Changed "shall" to "must"; changed “meeting” to “that meets”
811.106(a)	Board	Changed "shall" to "must"
811.106(b)	Board	Changed "subsection (a)" to "subsection (a) of this Section"
811.106(c)	Board	Changed "subsections (a) and (b)" to "subsections (a) and (b) of this Section"; added the bracketed statutory citation “[415 ILCS 5/28.1]”; corrected “35 Ill. Adm. Code 106” to “Subpart D of 35 Ill. Adm. Code 104”; changed "this subsection" to "this subsection (c)"; changed “will” to “must”; added “fulfill the following requirements”
811.106(c)(1)	Board	Added “they must”
811.106(c)(2)	Board	Added “they must”
811.106(c)(3)	Board	Added “they must”
811.106(c) Board note	Board	Added “this”; updated the citation to the <i>Code of Federal Regulations</i> to the most recent edition, including removal of the <i>Federal Register</i> citation
811.107(a)	Board	Added the ending period
811.107(a)(1)	Board	Changed "shall" to "must"; changed "shall mean" to "means"; added a comma after "gas collection system" to separate the final element of a series
811.107(a)(2)	Board	Changed "shall" to "must"
811.107(a)(3)	Board	Changed "shall" to "must"
811.107(b)	Board	Added the ending period
811.107(b)(1)	Board	Changed "shall" to "must"
811.107(b)(2)	Board	Changed "shall" to "must"
811.107(c)	Board	Added the ending period; changed "shall" to "must"
811.107(d)	Board	Added the ending period; changed "shall" to "must"
811.107(e)	Board	Added the ending period; changed "shall" to "must"
811.107(f)	Board	Added the ending period; added a comma before "except" to offset a parenthetical
811.107(g)	Board	Added the ending period; changed "shall" to "must"; added a comma before "so as to prevent" to offset a parenthetical

811.107(h)	Board	Added the ending period; changed "shall" to "must" (twice); added a comma after "constructed" to separate the final element of a series; added the bracketed statutory citation “[415 ILCS 5/24]”
811.107(i)	Board	Added the ending period; changed "shall" to "must"
811.107(j)	Board	Added the ending period; changed "shall" to "must"
811.107(k)	Board	Added the ending period
811.107(k)(1)	Board, JCAR	Changed "shall" to "must" (twice)
811.107(k)(2)	Board	Changed "shall" to "must"
811.107(l)	Board	Added the ending period; changed "shall" to "must"
811.107(m)	Board, JCAR	Changed lower-case “units” to capitalized “Units”; added the ending period
811.107(m)(1)	Board	Added a comma before "unless" to offset a parenthetical; added “one of the following is true”
811.107(m)(1)(A)	Board	Removed the ending conjunction “or”
811.107(m)(1)(B)	Board, Agency	Changed the ending period to a semicolon; added the ending conjunction “or”
811.107(m)(2)	Board, JCAR	Corrected “a MSWLF unit” to “an MSWLF unit”; added a comma before "unless" to offset a parenthetical; added “one of the following is true”
811.107(m)(3)	Board	Added “the following definitions apply”
811.107(m)(3)(A)	Board	Changed “EPA” to “USEPA”
811.107(m) Board note	Board, Agency, JCAR	Added “this”; changed singular “subsection (m) is” to capitalized, plural “Subsections (m)(1) through (m)(3) are”; updated the citation to the <i>Code of Federal Regulations</i> to the most recent edition; added “Subsection (m)(1)(C) is derived from . . . (2004)”
811.310(b)	Board	Added the ending period
811.310(b)(1)	Board	Changed "shall" to "must"
811.310(b)(2)	Board	Changed "shall" to "must"
811.310(b)(4)	Board	Changed "shall" to "must"
811.310(b)(5)	Board	Changed "shall" to "must"
811.310(b)(6)	Board	Changed "shall" to "must"
811.310(b)(7)	Board	Changed "shall" to "must"; added a comma after "leachate collection system" to separate the final element of a series
811.310(b)(8)	Board	Changed "shall" to "must" (twice)
811.310(c)	Board	Added the ending period
811.310(c)(1)	Board	Changed "shall" to "must"
811.310(c)(4)	Board	Changed "shall" to "must"; changed "subsections (c)(5) and (c)(6)" to "subsections (c)(5) and (c)(6) of this Section"

811.310(c)(4)(B)	Board	Changed "subsection (a)(1)" to "subsection (a)(1) of this Section"
811.310(c)(6)	Board	Changed "shall" to "must"
811.310(c) Board note	Board	Changed "changes to subsection (c)" to "those segments of this subsection (c) that relate to MSWLF unit"; updated the citation to the <i>Code of Federal Regulations</i> to the most recent edition
811.310(d)	Board	Added the ending period
811.310(d)(1)	Board	Changed "shall" to "must"
811.310(d)(2)	Board	Changed "shall" to "must"; changed numeric "8" to written "eight"
811.310(d)(3)	Board	Changed "shall" to "must"
811.310(e)	Board	Changed "subsection (c)" to "subsection (c) of this Section"; added the bracketed statutory citation "[415 ILCS 5/28.1]"; changed "35 Ill. Adm. Code 106" to "Subpart D of 35 Ill. Adm. Code 104"; changed "will" to "must"; added "fulfill the following requirements"
811.310(e)(1)	Board	Added "they must"
811.310(e)(2)	Board	Added "they must"
811.310(e)(3)	Board	Added "they must"
811.310(e) Board note	Board	Corrected "subsection (d)" to "this subsection (e)"; updated the citation to the <i>Code of Federal Regulations</i> to the most recent edition, including removal of the <i>Federal Register</i> citation
811.314(a)	Board	Changed "shall" to "must"
811.314(b)	Board	Added the ending period
811.314(b)(1)	Board	Changed "shall" to "must"
811.314(b)(2)	Board	Changed "shall" to "must"
811.314(b)(3)	Board	Changed "shall" to "must"
811.314(b)(3)(A)(i)	Board	Changed "shall" to "must"; added the ending conjunction "and"
811.314(b)(3)(A)(ii)	Board	Changed "shall" to "must"
811.314(b)(3)(A)(iii)	Board	Changed "subsections (b)(3)(A)(i) and (b)(3)(A)(ii)" to "subsections (b)(3)(A)(i) and (b)(3)(A)(ii) of this Section"
811.314(b)(3)(B)(i)	Board	Changed "shall" to "must"; changed "subsection (b)(3)(A)" to "subsection (b)(3)(A) of this Section"
811.314(b)(3)(B)(ii)	Board	Changed "shall" to "must"
811.314(b)(3)(B)(iii)	Board	Changed "shall" to "must"; changed "which" to "that" for a restrictive relative clause
811.314(b)(3)(C)	Board	Changed "this subsection" to "this subsection (b)"
811.314(b)(4)	Board	Changed "subsection (b)(3)" to "subsection (b)(3) of this Section"; changed "shall" to "must"
811.314(c)	Board	Added the ending period

811.314(c)(1)	Board	Changed "shall" to "must"
811.314(c)(2)	Board	Changed "shall" to "must" (twice)
811.314(c)(3)	Board	Changed "shall" to "must"
811.314(c)(4)	Board	Changed "shall" to "must"; added a comma after "freezing" to separate the final element of a series
811.314(d)	Board	Changed "subsection (b)" to "subsection (b) of this Section"; added the statutory citation "[415 ILCS 5/28.1]"; changed "35 Ill. Adm. Code 106" to "Subpart D of 35 Ill. Adm. Code 104"; added "fulfill the following requirements"
811.314(d)(1)	Board	Added "they must"
811.314(d)(2)	Board	Added "they must"
811.314(d)(3)	Board	Added "they must"
811.314 Board note	Board	Changed "subsection (b)(4)" to "subsection (b)(4) of this Section"; updated the citation to the <i>Code of Federal Regulations</i> to the most recent edition (twice), including removal of the <i>Federal Register</i> citation (once); added "Those segments of subsection (a) . . . 40 CFR 258.4 (2004)."
813.101	Board	Changed "this Subpart" to "this Subpart A"; replaced the parenthetical Illinois Revised Statutes citation "(Ill. Rev. Stat. 1991, ch. 111 1/2, par. 1021(d))" with the bracketed Illinois Compiled Statutes citation "[415 ILCS 5/21(d)]"; added a comma after "814" to separate the final element of a series
813.110(a)	Board	Changed "which" to "that" for a restrictive relative clause; added "Section 813.112 or"
813.110(b)	Board	Added the bracket statutory citation "[415 ILCS 5/28.1]"; changed "35 Ill. Adm. Code 106" to "Subpart D of 35 Ill. Adm. Code 104"
813.110(c)	Board	Changed "shall" to "must"; changed "35 Ill. Adm. Code 106" to "Subpart D of 35 Ill. Adm. Code 104"
813.110(c)(4)	Board	Changed "shall" to "must"; changed "subsection (f)(1)" to "subsection (f)(1) of this Section"
813.110(d)	Board	Changed "subsection (b)" to "subsection (b) of this Section"; added the bracket statutory citation "[415 ILCS 5/28.1]"; changed "35 Ill. Adm. Code 106" to "Subpart D of 35 Ill. Adm. Code 104"
813.110(d)(4)	Board	Added a comma after "812" to offset the final element of a series; added a comma before "should the experiment fail" to offset it as a parenthetical
813.110(e)	Board	Added the ending period; changed "subsection (d)" to "subsection (d) of this Section"; changed "shall" to "must" (twice); changed "Section 813.Subpart B" to "Subpart B of Section 813"

813.110(e)(4)	Board	Added a comma after "removing" to separate the final element of a series
813.110(e)(6)	Board	Changed "35 Ill. Adm. Code 811.Subpart G" to "Subpart G of 35 Ill. Adm. Code 811"; changed "35 Ill. Adm. Code:Chapter I" to "Chapter I of 35 Ill. Adm. Code"
813.110(f)	Board	Added the ending period
813.110(f)(1)	Board	Added a comma after "after completion of the experiment" to offset it as an introductory phrase; changed "subsection (c)(4)" to "subsection (c)(4) of this Section"; changed "shall" to "must"; added the bracketed statutory citation "[415 ILCS 5/39]"
813.110(f)(1)(A)	Board	Changed "shall" to "must"; changed "subsection (c)(4)" to "subsection (c)(4) of this Section"
813.110(f)(1)(B)	Board	Added the statutory citation "[415 ILCS 5]"; changed "35 Ill. Adm. Code:Chapter I" to "Chapter I of 35 Ill. Adm. Code"
813.110(f)(2)	Board	Changed "shall" to "must" (three times); changed "35 Ill. Adm. Code:Chapter I" to "Chapter I of 35 Ill. Adm. Code"

Table 4:  
Revisions to the Text of the Proposed Amendments in Final Adoption

Section Revised	Source(s)	Revision(s)
810.103 "Agency"	Board	Changed the format of the statutory citation "(Section 3.105 of the Act)" to "[415 ILCS 5/3.105]"
810.103 "Board"	Board	Changed the format of the statutory citation "(Section 3.130 of the Act)" to "[415 ILCS 5/3.130]"
810.103 "disposal"	Board	Changed the format of the statutory citation "(Section 3.185 of the Act)" to "[415 ILCS 5/3.185]"
810.103 "existing MSWLF facility"	Board	Changed the format of the statutory citation "(Section 3.285 of the Act)" to "[415 ILCS 5/3.285]"
810.103 "facility"	Board	Added a comma after "storage" to offset the final element of a series
810.103 "household waste"	Board	Changed the format of the statutory citation "(Section 3.230 of the Act)" to "[415 ILCS 5/3.230]"
810.103 "hydraulic barriers"	Board	Added a comma after "grout curtains" to offset the final element of a series
810.103 "lateral expansion"	Board	Changed the format of the statutory citation "(Section 3.275 of the Act)" to "[415 ILCS 5/3.275]"
810.103 "malodor"	Board	Changed the format of the statutory citation "(Section 3.115 of the Act)" to "[415 ILCS 5/3.115]"
810.103 "municipal solid waste landfill"	Board	Changed the format of the statutory citation "(Section 3.285 of the Act)" to "[415 ILCS 5/3.285]"

810.103 “National Pollutant Discharge Elimination System”	Board	Added the statutory citation “[415 ILCS 5/12(f)]”
810.103 “new facility”	Board	Added the statutory citation “[415 ILCS 5/12(d)]” (twice)
810.103 “new MSWLF facility”	Board	Changed the format of the statutory citation “(Section 3.285 of the Act)” to “[415 ILCS 5/3.285]”
810.103 “one hundred-year flood plain”	JCAR	Changed “hundred” to “hundred-year” to reflect text on file
810.103 “one hundred-year, 24-hour precipitation event”	JCAR	Changed “hundred” to “hundred-year” to reflect text on file
810.103 “person”	Board	Changed the format of the statutory citation “(Section 3.315 of the Act)” to “[415 ILCS 5/3.315]”
810.103 “research, development, and demonstration permit”	Onyx	Removed the clause “an adjusted standard issued under”; removed the parenthetical “as derived from 40 CFR 258.4 (2004)”; removed the restrictive relative clause “that allows the testing of an innovative technology at an MSWLF unit”
810.103 “Resource Conservation and Recovery Act”	Board	Changed the format of the statutory citation “(Section 3.425 of the Act)” to “[415 ILCS 5/3.425]”
810.103 “significant modification”	Board	Added the statutory citation “[415 ILCS 5/39]”
810.103 “special waste”	Board	Added the statutory citation “[415 ILCS 5/22.9]”; changed the format of the statutory citation “(Section 3.475 of the Act)” to “[415 ILCS 5/3.475]”
811.103(b)(1)	JCAR; Onyx	Changed “an RD&D permit” to “a research, development, and demonstration (RD&D) permit”; removed “an adjusted standard issued under”
811.103(b)(2)	Onyx	Removed “an adjusted standard issued under”
811.107(k)(1)	JCAR	Removed the overstruck “liter” and underlining from “litter” to reflect text on file
811.107(m)	JCAR	Changed lower-case “units” to capitalized “Units”
811.107(m)(1)(C)	Onyx	Removed “an adjusted standard issued under”
811.107(m)(2)	JCAR	Corrected “a MSWLF unit” to “an MSWLF unit”
811.107(m) Board note	JCAR	Corrected singular “subsection (m)(1) through (m)(3) is” to capitalized, plural “Subsections (m)(1) through (m)(3) are”
811.314(b)(3)(A)(i)	Board	Added the ending conjunction “and”
811.314(d)	Board	Added the statutory citation “[415 ILCS 5/28.1]”
813.110(d)(4)	Board	Added a comma after “812” to offset the final element of a series
813.110(f)(1)(B)	Board	Added the statutory citation “[415 ILCS 5]”



813.112	Onyx	Removed the preamble relating to obtaining an adjusted standard to obtain an RD&D permit
813.112(a)	Onyx	Changed “the Board has determined by an adjusted standard . . . that” to “the Agency has determined that”
813.112(b)	Onyx	Changed “the Board has determined by an adjusted standard . . . that” to “the Agency has determined that”
813.112(d)	Board	Added the statutory citation “[415 ILCS 5]”

Table 4  
Requested Revisions to the Text of the Proposed Amendments Not Made in Final Adoption

Section Affected	Source(s) of Request: Requested Revision(s)	Explanation
811.314(a)(3)(A)(ii)	JCAR: Change the ending period to a semicolon.	Subsections (a)(3)(A)(i) and (a)(3)(A)(ii) present coordinate requirements, while subsection (a)(3)(A)(iii) presents an alternative to the two preceding subsections; the requested punctuation could cause confusion that subsection (a)(3)(A)(iii) presents an alternative.
813.110(d)(4)	JCAR: Add a comma after “814.”	That comma was included in the proposed amendments; the comma that is necessary would follow “812”

### **ORDER**

The complete text of the adopted amendments follows:

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

PART 810  
SOLID WASTE DISPOSAL: GENERAL PROVISIONS

Section	
810.101	Scope and Applicability
810.102	Severability
810.103	Definitions
810.104	Incorporations by Reference

AUTHORITY: Implementing Sections 5, 21, 21.1, 22, 22.17, and 28.1 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1 and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15838, effective September 18, 1990; amended in R93-10 at 18 Ill. Reg. 1268, effective January 13, 1994; amended in R90-26 at 18 Ill. Reg. 12457, effective August 1, 1994; amended in R95-9 at 19 Ill. Reg. 14427, effective September 29, 1995; amended in R96-1 at 20 Ill. Reg. 11985, effective August 15, 1996; amended in R97-20 at 21 Ill. Reg. 15825, effective November 25, 1997; amended in R04-5/R04-15 at 28 Ill. Reg. 9090, effective June 18, 2004; amended in R05-1 at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

## Section 810.103 Definitions

Except as stated in this Section, or unless a different meaning of a word or term is clear from the context, the definition of words or terms in this Part will be the same as that applied to the same words or terms in the Environmental Protection Act (Act) [415 ILCS 5]:

“Act” means the Environmental Protection Act [415 ILCS 5].

“Admixtures” are chemicals added to earth materials to improve for a specific application the physical or chemical properties of the earth materials. Admixtures include, but are not limited to: lime, cement, bentonite, and sodium silicate.

“Agency” is the Environmental Protection Agency established by the Environmental Protection Act. (~~Section [415 ILCS 5/3.105 of the Act]~~)

“Applicant” means the person submitting an application to the Agency for a permit for a solid waste disposal facility.

“Aquifer” means saturated (with groundwater) soils and geologic materials which are sufficiently permeable to readily yield economically useful quantities of water to wells, springs, or streams under ordinary hydraulic gradients and whose boundaries can be identified and mapped from hydrogeologic data. (Section 3 of the Illinois Groundwater Protection Act [415 ILCS 55/3])

“Bedrock” means the solid rock formation immediately underlying any loose superficial material such as soil, alluvium, or glacial drift.

“Beneficially usable waste” means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents which exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

“Board” is the Pollution Control Board established by the Act. (~~Section [415 ILCS 5/3.130 of the Act]~~)

“Borrow area” means an area from which earthen material is excavated for the purpose of constructing daily cover, final cover, a liner, a gas venting system, roadways, or berms.

“Chemical waste” means a non-putrescible solid whose characteristics are such that any contaminated leachate is expected to be formed through chemical or physical processes, rather than biological processes, and no gas is expected to be formed as a result.

“Coal combustion power generating facilities” means establishments that generate electricity by combusting coal and which utilize a lime or limestone scrubber system.

“Contaminated leachate” means any leachate whose constituent violate the standards of 35 Ill. Adm. Code 811.202.

“Dead animal disposal site” means an on-the-farm disposal site at which the burial of dead animals is done in accordance with the Illinois Dead Animal Disposal Act [225 ILCS 610] and regulations adopted pursuant thereto (8 Ill. Adm. Code 90).

“Design Period” means that length of time determined by the sum of the operating life of the solid waste landfill facility plus the postclosure care period necessary to stabilize the waste in the units.

*“Disposal” means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water or into any well such that solid waste or any constituent of the solid waste may enter the environment by being emitted into the air or discharged into any waters, including groundwater.* (~~Section [415 ILCS 5/3.185 of the Act]~~) If the solid waste is accumulated and not confined or contained to prevent its entry into the environment, or there is no certain plan for its disposal elsewhere, such accumulation will constitute disposal.

“Disturbed areas” means those areas within a facility that have been physically altered during waste disposal operations or during the construction of any part of the facility.

“Documentation” means items, in any tangible form, whether directly legible or legible with the aid of any machine or device, including but not limited to affidavits, certificates, deeds, leases, contracts or other binding agreements, licenses, permits, photographs, audio or video recordings, maps, geographic surveys, chemical and mathematical formulas or equations, mathematical and statistical calculations and assumptions, research papers, technical reports, technical designs and design drawings, stocks, bonds, and financial records, that are used to support facts or hypotheses.

“Earth liners” means structures constructed from naturally occurring soil material that has been compacted to achieve a low permeability.

“Existing facility” or “Existing unit” means a facility or unit that is not defined in this Section as a new facility or a new unit.

*“Existing MSWLF unit” means any municipal solid waste landfill unit that has received household waste before October 9, 1993. (Section [415 ILCS 5/3.285 of the Act])*

“Facility” means a site and all equipment and fixtures on a site used to treat, store or dispose of solid or special wastes. A facility consists of an entire solid or special waste treatment, storage, or disposal operation. All structures used in connection with or to facilitate the waste disposal operation will be considered a part of the facility. A facility may include, but is not limited to, one or more solid waste disposal units, buildings, treatment systems, processing and storage operations, and monitoring stations.

“Field capacity” means that maximum moisture content of a waste, under field conditions of temperature and pressure, above which moisture is released by gravity drainage.

“Foundry sand” means pure sand or a mixture of sand and any additives necessary for use of the sand in the foundry process, but does not include such foundry process by-products as air pollution control dust or refractories.

“Gas collection system” means a system of wells, trenches, pipes and other related ancillary structures such as manholes, compressor housing, and monitoring installations that collects and transports the gas produced in a putrescible waste disposal unit to one or more gas processing points. The flow of gas through such a system may be produced by naturally occurring gas pressure gradients or may be aided by an induced draft generated by mechanical means.

“Gas condensate” means the liquid formed as a landfill gas is cooled or compressed.

“Gas venting system” means a system of wells, trenches, pipes and other related structures that vents the gas produced in a putrescible waste disposal unit to the atmosphere.

“Geomembranes” means manufactured membrane liners and barriers of low permeability used to control the migration of fluids or gases.

“Geotextiles” are permeable manufactured materials used for purposes that include, but are not limited to, strengthening soil, providing a filter to prevent clogging of drains, and collecting and draining liquids and gases beneath the ground surface.

*“Groundwater” means underground water which occurs within the saturated zone and within geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure. (Section 3 of the Illinois Groundwater Protection Act)*

*“Household waste” means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). (Section [415 ILCS 5/3.230 of the Act])*

*“Hydraulic barriers” means structures designed to prevent or control the seepage of water. Hydraulic barriers include, but are not limited to, cutoff walls, slurry walls, grout curtains, and liners.*

*“Inert waste” means any solid waste that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a contaminated leachate, as determined in accordance with 35 Ill. Adm. Code 811.202(b). Such inert wastes will include only non-biodegradable and non-putrescible solid wastes. Inert wastes may include, but are not limited to, bricks, masonry, and concrete (cured for 60 days or more).*

*“Iron slag” means slag.*

*“Land application unit” means an area where wastes are agronomically spread over or disked into land or otherwise applied so as to become incorporated into the soil surface. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a land application unit is not a landfill; however, other Parts of 35 Ill. Adm. Code: Chapter I may apply, and may include the permitting requirements of 35 Ill. Adm. Code 309.*

*“Landfill” means a unit or part of a facility in or on which waste is placed and accumulated over time for disposal, and which is not a land application unit, a surface impoundment or an underground injection well. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, landfills include waste piles, as defined in this Section.*

*“Lateral expansion” means a horizontal expansion of the actual waste boundaries of an existing MSWLF unit occurring on or after October 9, 1993. A horizontal expansion is any area where solid waste is placed for the first time directly upon the bottom liner of the unit, excluding side slopes on or after October 9, 1993. (Section [415 ILCS 5/3.275 of the Act])*

*“Leachate” means liquid that has been or is in direct contact with a solid waste.*

“Lift” means an accumulation of waste that is compacted into a unit and over which cover is placed.

“Low risk waste” means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents that exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

“Malodor” means an odor caused by *one or more contaminant emissions into the atmosphere from a facility that is in sufficient quantities and of such characteristics and duration as to be described as malodorous and which may be injurious to human, plant, or animal life, to health, or to property, or may unreasonably interfere with the enjoyment of life or property.* (~~Section [415 ILCS 5/3.115 of the Act]~~ (defining “air pollution”))

*“Municipal solid waste landfill unit” or “MSWLF unit” means a contiguous area of land or an excavation that receives household waste, and that is not a land application, surface impoundment, injection well, or any pile of non-containerized accumulations of solid, non-flowing waste that is used for treatment or storage. A MSWLF unit may also receive other types of RCRA Subtitle D wastes, such as commercial solid waste, non-hazardous sludge, small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned or operated. a MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A sanitary landfill is subject to regulation as a MSWLF if it receives household waste.* (~~Section [415 ILCS 5/3.285 of the Act]~~) But, a landfill that receives residential lead-based paint waste and which does not receive any other household waste is not a MSWLF unit.

BOARD NOTE: The final sentence of corresponding 40 C.F.R. 258.2 provides as follows: “A construction and demolition landfill that receives residential lead-based paint waste and which does not receive any other household waste is not a MSWLF Unit.” A construction and demolition landfill is a type of landfill that does not exist in Illinois, so the Board omitted the reference to “construction and demolition landfill.” A landfill in Illinois that receives residential lead-based paint waste and no other type of household waste would be permitted as a chemical waste landfill or a putrescible waste landfill under Subpart C of 35 Ill. Adm. Code 811, as appropriate.

“National Pollutant Discharge Elimination System” or “NPDES” means the program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements under the Clean Water Act (33 USC 1251 et seq.), Section 12(f) of the Act [415 ILCS 5/12(f)], Subpart A of 35 Ill. Adm. Code 309, and 35 Ill. Adm. Code 310.

“NPDES permit” means a permit issued under the NPDES program.

“New facility” or “New unit” means a solid waste landfill facility or a unit at a facility, if one or more of the following conditions apply:

It is a landfill or unit exempt from permit requirements pursuant to Section 21(d) of the Act [415 ILCS 5/21(d)] that has not yet accepted any waste as of September 18, 1990;

It is a landfill or unit not exempt from permit requirements pursuant to Section 21(d) of the Act [415 ILCS 5/21(d)] that has no development or operating permit issued by the Agency pursuant to 35 Ill. Adm. Code 807 as of September 18, 1990; or

It is a landfill with a unit whose maximum design capacity or lateral extent is increased after September 18, 1990.

BOARD NOTE: A new unit located in an existing facility will be considered a unit subject to 35 Ill. Adm. Code 814, which references applicable requirements of 35 Ill. Adm. Code 811.

*“New MSWLF unit” means any municipal solid waste landfill unit that has received household waste on or after October 9, 1993 for the first time. (~~Section [415 ILCS 5/3.285 of the Act]~~)*

“One hundred-year flood plain” means any land area that is subject to a one percent or greater chance of flooding in a given year from any source.

“One hundred-year, 24-hour precipitation event” means a precipitation event of 24-hour duration with a probable recurrence interval of once in 100 years.

“Operator” means the person responsible for the operation and maintenance of a solid waste disposal facility.

“Owner” means a person who has an interest, directly or indirectly, in land, including a leasehold interest, on which a person operates and maintains a solid waste disposal facility. The “owner” is the “operator” if there is no other person who is operating and maintaining a solid waste disposal facility.

“Perched watertable” means an elevated watertable above a discontinuous saturated lens, resting on a low permeability (such as clay) layer within a high permeability (such as sand) formation.

“Permit area” means the entire horizontal and vertical region occupied by a permitted solid waste disposal facility.

*“Person” is any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision,*

*State agency, or any other legal entity, or their legal representative, agent or assigns. (Section [415 ILCS 5/3.315 of the Act])*

“Potentially usable waste” means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents that exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

“Poz-O-Tec materials” means materials produced by a stabilization process patented by Conversion Systems, Inc. utilizing flue gas desulfurization (FGD) sludges and ash produced by coal combustion power generation facilities as raw materials.

“Poz-O-Tec monofill” means a landfill in which solely Poz-O-Tec materials are placed for disposal.

“Professional engineer” means a person who has registered and obtained a seal pursuant to the Professional Engineering Practice Act of 1989 [225 ILCS 325].

“Professional land surveyor” means a person who has received a certificate of registration and a seal pursuant to the Illinois Professional Land Surveyor Act of 1989 [225 ILCS 330].

“Putrescible waste” means a solid waste that contains organic matter capable of being decomposed by microorganisms so as to cause a malodor, gases, or other offensive conditions, or which is capable of providing food for birds and vectors. Putrescible wastes may form a contaminated leachate from microbiological degradation, chemical processes, and physical processes. Putrescible waste includes, but is not limited to, garbage, offal, dead animals, general household waste, and commercial waste. All solid wastes that do not meet the definition of inert or chemical wastes will be considered putrescible wastes.

“Publicly owned treatment works” or “POTW” means a treatment works that is owned by the State of Illinois or a unit of local government. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastewater. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant. The term also means the unit of local government that has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

“Recharge zone” means an area through which water can enter an aquifer.

“Research, development, and demonstration permit” or “RD&D permit” means a permit issued pursuant to 35 Ill. Adm. Code 813.112.



“Residential lead-based paint waste” means waste containing lead-based paint that is generated as a result of activities such as abatement, rehabilitation, renovation, and remodeling in homes and other residences. The term residential lead-based paint waste includes, but is not limited to, lead-based paint debris, chips, dust, and sludges.

*“Resource Conservation and Recovery Act” or “RCRA” means the Resource Conservation and Recovery Act of 1976 (P.L. 94-580 codified as 42 USC. §§ 6901 et seq.) as amended. (Section [415 ILCS 5/3.425 of the Act])*

“Responsible charge,” when used to refer to a person, means that the person is normally present at a waste disposal site; directs the day-to-day overall operation at the site; and either is the owner or operator or is employed by or under contract with the owner or operator to assure that the day-to-day operations at the site are carried out in compliance with any Part of 35 Ill. Adm. Code: Chapter I governing operations at waste disposal sites.

“Runoff” means water resulting from precipitation that flows overland before it enters a defined stream channel, 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.

“Salvaging” means the return of waste materials to use, under the supervision of the landfill operator, so long as the activity is confined to an area remote from the operating face of the landfill, it does not interfere with or otherwise delay the operations of the landfill, and it results in the removal of all materials for salvaging from the landfill site daily or separates them by type and stores them in a manner that does not create a nuisance, harbor vectors, or cause an unsightly appearance.

“Scavenging” means the removal of materials from a solid waste management facility or unit that is not salvaging.

“Seismic Slope Safety Factor” means the ratio between the resisting forces or moments in a slope and the driving forces or moments that may cause a massive slope failure during an earthquake or other seismic event such as an explosion.

“Settlement” means subsidence caused by waste loading, changes in groundwater level, chemical changes within the soil, and adjacent operations involving excavation.

“Shredding” means the mechanical reduction in particle sizes of solid waste. Putrescible waste is considered shredded if 90 percent of the waste by dry weight passes a three-inch sieve.

“Significant Modification” means a modification to an approved permit issued by the Agency in accordance with Section 39 of the Act [415 ILCS 5/39] and 35 Ill. Adm. Code 813 that is required when one or more of the following changes (considered significant when that change is measured by one or more parameters whose values lie outside the expected operating range of values as specified in the permit) are planned, occur, or will occur:

An increase in the capacity of the waste disposal unit over the permitted capacity;

Any change in the placement of daily, intermediate, or final cover;

A decrease in performance, efficiency, or longevity of the liner system;

A decrease in efficiency or performance of the leachate collection system;

A change in configuration, performance, or efficiency of the leachate management system;

A change in the final disposition of treated effluent or in the quality of the discharge from the leachate treatment or pretreatment system;

Installation of a gas management system or a decrease in the efficiency or performance of an existing gas management system;

A change in the performance or operation of the surface water control system;

A decrease in the quality or quantity of data from any environmental monitoring system;

A change in the applicable background concentrations or the maximum allowable predicted concentrations;

A change in the design or configuration of the regraded area after development or after final closure;

A change in the amount or type of postclosure financial assurance;

Any change in the permit boundary;

A change in the postclosure land use of the property;

A remedial action necessary to protect groundwater;

Transfer of the permit to a new operator;

Operating authorization is being sought to place into service a structure constructed pursuant to a construction quality assurance program; or

A change in any requirement set forth as a special condition in the permit.

“Slag” means the fused agglomerate that separates in the iron and steel production and floats on the surface of the molten metal.

“Sole source aquifer” means those aquifers designated pursuant to Section 1424(e) of the Safe Drinking Water Act of 1974 (42 USC 300h-3).

“Solid Waste” means a waste that is defined in this Section as an inert waste, as a putrescible waste, as a chemical waste or as a special waste, and which is not also defined as a hazardous waste pursuant to 35 Ill. Adm. Code 721.

*“Special waste” means any industrial process waste, pollution control waste, or hazardous waste, except as determined pursuant to Section 22.9 of the Act [415 ILCS 5/22.9] and 35 Ill. Adm. Code 808. (~~Section [415 ILCS 5/3.475 of the Act]~~)*

“Static Safety Factor” means the ratio between resisting forces or moments in a slope and the driving forces or moments that may cause a massive slope failure.

“Steel slag” means slag.

“Surface impoundment” means a natural topographic depression, a man-made excavation, or a diked area into which flowing wastes, such as liquid wastes or wastes containing free liquids, are placed. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a surface impoundment is not a landfill. Other Parts of 35 Ill. Adm. Code: Chapter I may apply, including the permitting requirements of 35 Ill. Adm. Code 309.

“Twenty-five-year, 24-hour precipitation event” means a precipitation event of 24-hour duration with a probable recurrence interval of once in 25 years.

“Uppermost aquifer” means the first geologic formation above or below the bottom elevation of a constructed liner or wastes, where no liner is present, that is an aquifer, and includes any lower aquifer that is hydraulically connected with this aquifer within the facility’s permit area.

“Unit” means a contiguous area used for solid waste disposal.

“Unit of local government” means a unit of local government, as defined by Article 7, Section 1 of the Illinois Constitution. A unit of local government may include, but is not limited to, a municipality, a county, or a sanitary district.

“Waste pile” means an area on which non-containerized masses of solid, non-flowing wastes are placed for disposal. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a waste pile is a landfill, unless the operator can demonstrate that the wastes are not accumulated over time for disposal. At a minimum, such demonstration must include photographs, records, or other observable or discernable information, maintained on a yearly basis, that show that within the preceding year the waste has been removed for utilization or disposal elsewhere.

“Waste stabilization” means any chemical, physical, or thermal treatment of waste, either alone or in combination with biological processes, that results in a reduction of microorganisms, including viruses, and the potential for putrefaction.

“Working face” means any part of a landfill where waste is being disposed of.

“Zone of attenuation” means the three dimensional region formed by excluding the volume occupied by the waste placement from the smaller of the volumes resulting from vertical planes drawn to the bottom of the uppermost aquifer at the property boundary or 100 feet from the edge of one or more adjacent units.

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 811  
 STANDARDS FOR NEW SOLID WASTE LANDFILLS

SUBPART A: GENERAL STANDARDS FOR ALL LANDFILLS

Section	
811.101	Scope and Applicability
811.102	Location Standards
811.103	Surface Water Drainage
811.104	Survey Controls
811.105	Compaction
811.106	Daily Cover
811.107	Operating Standards
811.108	Salvaging
811.109	Boundary Control
811.110	Closure and Written Closure Plan
811.111	Postclosure Maintenance
811.112	Recordkeeping Requirements for MSWLF Units

### SUBPART B: INERT WASTE LANDFILLS

Section	
811.201	Scope and Applicability
811.202	Determination of Contaminated Leachate
811.203	Design Period
811.204	Final Cover
811.205	Final Slope and Stabilization
811.206	Leachate Sampling
811.207	Load Checking

### SUBPART C: PUTRESCIBLE AND CHEMICAL WASTE LANDFILLS

Section	
811.301	Scope and Applicability
811.302	Facility Location
811.303	Design Period
811.304	Foundation and Mass Stability Analysis
811.305	Foundation Construction
811.306	Liner Systems
811.307	Leachate Drainage System
811.308	Leachate Collection System
811.309	Leachate Treatment and Disposal System
811.310	Landfill Gas Monitoring
811.311	Landfill Gas Management System
811.312	Landfill Gas Processing and Disposal System
811.313	Intermediate Cover
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 811.502 Duties and Qualifications of Key Personnel  
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##### Section

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811.Appendix B                      Section-by-Section correlation between the Standards of the RCRA Subtitle D MSWLF regulations and the Board's nonhazardous waste landfill regulations.

AUTHORITY: Implementing Sections 5, 21, 21.1, 22, 22.17 and 28.1 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1, and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15861, effective September 18, 1990; amended in R92-19 at 17 Ill. Reg. 12413, effective July 19, 1993; amended in R93-10 at 18 Ill. Reg. 1308, effective January 13, 1994; expedited correction at 18 Ill. Reg. 7504, effective July 19, 1993; amended in R90-26 at 18 Ill. Reg. 12481, effective August 1, 1994; amended in R95-13 at 19 Ill. Reg. 12257, effective August 15, 1995; amended in R96-1 at 20 Ill. Reg. 12000, effective August 15, 1996; amended in R97-20 at 21 Ill. Reg. 15831, effective November 25, 1997; amended in R98-9 at 22 Ill. Reg. 11491, effective June 23, 1998; amended in R99-1 at 23 Ill. Reg. 2794, effective February 17, 1999; amended in R98-29 at 23 Ill. Reg. 6880, effective July 1, 1999; amended in R04-5/R04-15 at 28 Ill. Reg. 9107, effective June 18, 2004; amended in R05-1 at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

#### SUBPART A: GENERAL STANDARDS FOR ALL LANDFILLS

Section 811.103                      Surface Water Drainage

- a)                      Runoff From Disturbed Areas.
- 1)                      Runoff from disturbed areas resulting from precipitation events less than or equal to the 25-year, 24-hour precipitation event that is discharged to waters of the State ~~shall~~must meet the requirements of 35 Ill. Adm. Code 304.
  - 2)                      All discharges of runoff from disturbed areas to waters of the State ~~shall~~must be permitted by the Agency in accordance with 35 Ill. Adm. Code 309.
  - 3)                      All treatment facilities ~~shall~~must be equipped with bypass outlets designed to pass the peak flow of runoff from the 100-year, 24-hour precipitation event without damage to the treatment facilities or surrounding structures.
  - 4)                      All surface water control structures ~~shall~~must be operated until the final cover is placed and erosional stability is provided by the vegetative or other cover meeting the requirements of Section 811.205 or 811.322.

- 5) All discharge structures ~~shall~~must be designed to have flow velocities that will not cause erosion and scouring of the natural or ~~constructed~~ constructed lining, i.e., bottom and sides, of the receiving stream channel.
- b) Diversion of Runoff From Undisturbed Areas.
- 1) Runoff from undisturbed areas ~~shall~~must be diverted around disturbed areas, unless the operator shows that it is impractical based on site-specific conditions or unless the Agency has issued a research, development, and demonstration (RD&D) permit that provides otherwise pursuant to 35 Ill. Adm. Code 813.112(a)(1), relating to run-on control systems, and that permit is in effect.
- 2) Diversion facilities ~~shall~~must be designed to prevent runoff from the 25-year, 24-hour precipitation event from entering disturbed areas, unless the Agency has issued an RD&D permit that provides otherwise pursuant to 35 Ill. Adm. Code 813.112(a)(1), relating to run-on control systems, and that permit is in effect.
- 3) Runoff from undisturbed areas ~~which~~that becomes commingled with runoff from disturbed areas ~~shall~~must be handled as runoff from disturbed areas and treated in accordance with subsection (a) of this Section.
- 4) All diversion structures ~~shall~~must be designed to have flow velocities that will not cause erosion and scouring of the natural or constructed lining, i.e., the bottom and sides, of the diversion channel and downstream channels.
- 5) All diversion structures ~~shall~~must be operated until the final cover is placed and erosional stability is provided by the vegetative or other cover ~~meeting that meets~~ the requirements of Section 811.205 or 811.322.

BOARD NOTE: Those segments of subsections (b)(1) and (b)(2) of this Section that relate to RD&D permits are derived from 40 CFR 258.4(a)(1) (2004).

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 811.106      Daily Cover

- a) A uniform layer of at least 0.15 meter (six inches) of clean soil material ~~shall~~ must be placed on all exposed waste by the end of each day of operation.
- b) Alternative materials or procedures, including the removal of daily cover prior to additional waste placement, may be used, provided that the alternative materials or procedures achieve equivalent or superior performance to the requirements of subsection (a) of this Section in the following areas:



- 1) Prevention of blowing debris;
  - 2) Minimization of access to the waste by vectors;
  - 3) Minimization of the threat of fires at the open face; and
  - 4) Minimization of odors.
- c) Any alternative frequencies for cover requirements to those set forth in subsections (a) and (b) of this Section for any owner or operator of an MSWLF that disposes of 20 tons of municipal solid waste per day or less, based on an annual average, must be established by an adjusted standard pursuant to Section 28.1 of the Act [415 ILCS 5/28.1] and Subpart D of 35 Ill. Adm. Code 106 104. Any alternative requirements established under this subsection ~~(c) will~~ must fulfill the following requirements:
- 1) ~~Consider~~ They must consider the unique characteristics of small communities;
  - 2) ~~Take~~ They must take into account climatic and hydrogeologic conditions; and
  - 3) ~~Be~~ They must be protective of human health and the environment.

BOARD NOTE: ~~Subsection~~ This subsection (c) is derived from 40 CFR 258.21(d), as added at 62 Fed. Reg. 40707 (July 29, 1997) (2004).

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 811.107 Operating Standards

- a) Phasing of Operations.
  - 1) Waste ~~shall~~ must be placed in a manner and at such a rate that mass stability is provided during all phases of operation. Mass stability ~~shall mean~~ means that the mass of waste deposited will not undergo settling or slope failure that interrupts operations at the facility or causes damage to any of the various landfill operations or structures, such as the liner, leachate or drainage collection system, gas collection system, or monitoring system.
  - 2) The phasing of operations at the facility ~~shall~~ must be designed in such a way as to allow the sequential construction, filling, and closure of discrete units or parts of units.

- 3) The operator ~~shall~~must design and sequence the waste placement operation in each discrete unit or parts of units, in conjunction with the overall operations of the facility, so as to shorten the operational phase and allow wastes to be built up to the planned final grade.

b) Size and Slope of Working Face.

- 1) The working face of the unit ~~shall~~must be no larger than is necessary, based on the terrain and equipment used in waste placement, to conduct operations in a safe and efficient manner.
- 2) The slopes of the working face area ~~shall~~must be no steeper than two to one (horizontal to vertical) unless the waste is stable at steeper slopes.

c) Equipment.

Equipment ~~shall~~must be maintained and available for use at the facility during all hours of operation, so as to achieve and maintain compliance with the requirements of this Part.

d) Utilities.

All utilities, including but no limited to heat, lights, power and communications equipment, necessary for safe operation in compliance with the requirements of this Part ~~shall~~must be available at the facility at all times.

e) Maintenance.

The operator ~~shall~~must maintain and operate all systems and related appurtenances and structures in a manner that facilitates proper operations in compliance with this Part.

f) Open Burning.

Open burning is prohibited, except in accordance with 35 Ill. Adm. Code 200 through 245.

g) Dust Control.

The operator ~~shall~~must implement methods for controlling dust, so as to prevent wind dispersal of particulate matter.

h) Noise Control.

The facility ~~shall~~must be designed, constructed, and maintained to minimize the level of equipment noise audible outside the facility. The facility ~~shall~~must not

cause or contribute to a violation of 35 Ill. Adm. Code 900 through 905 or of Section 24 of the Act [415 ILCS 5/24].

i) Vector Control.

The operator ~~shall~~ must implement measures to control the population of disease and nuisance vectors.

j) Fire Protection.

The operator ~~shall~~ must institute fire protection measures including, but not limited to, maintaining a supply of water onsite and radio or telephone access to the nearest fire department.

k) Litter Control.

1) The operator ~~shall~~ must patrol the facility daily to check for litter accumulation. All litter ~~shall~~ must be collected and placed in the fill or in a secure, covered container for later disposal.

2) The facility ~~shall~~ must not accept solid waste from vehicles that do not utilize devices such as covers or tarpaulins to control litter, unless the nature of the solid waste load is such that it cannot cause any litter during its transportation to the facility.

l) Mud Tracking. The facility ~~shall~~ must implement methods, such as use of wheel washing units, to prevent tracking of mud by hauling vehicles onto public roadways.

m) Liquids Restrictions for MSWLF ~~units~~ Units.

1) Bulk or noncontainerized liquid waste may not be placed in MSWLF units, unless one of the following conditions is true:

A) The waste is household waste other than septic waste; ~~or~~

B) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF unit or lateral expansion, is designed with a composite liner and leachate collection system that complies with the requirements of Sections 811.306 through 811.309; or

C) The Agency has issued an RD&D permit pursuant to 35 Ill. Adm. Code 813.112(a)(2) that allows the placement of noncontainerized liquids in the landfill, and that permit is in effect.

- 2) Containers holding liquid waste may not be placed in ~~a~~an MSWLF unit, unless one of the following conditions is true:
  - A) The container is a small container similar in size to that normally found in household waste;
  - B) The container is designed to hold liquids for use other than storage; or
  - C) The waste is household waste.
  
- 3) For purposes of this Section, the following definitions apply:
  - A) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (~~EPA-USEPA~~ Pub. No. SW-846) incorporated by reference in 35 Ill. Adm. Code 810.104.
  - B) "Gas condensate" means the liquid generated as a result of gas recovery processes at the MSWLF unit.

BOARD NOTE: ~~Subsection~~ Subsections 811.107(m)(1) through (m)(3) is-are derived from 40 CFR 258.28-~~(1992)~~ (2004). Subsection (m)(1)(C) of this Section relating to RD&D permits is derived from 40 CFR 258.4(a)(2) (2004).

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART C: PUTRESCIBLE AND CHEMICAL WASTE LANDFILLS

##### Section 811.310 Landfill Gas Monitoring

- a) This Section applies to all units that dispose putrescible wastes.
- b) Location and Design of Monitoring Wells.
  - 1) Gas monitoring devices ~~shall~~must be placed at intervals and elevations within the waste to provide a representative sampling of the composition and buildup of gases within the unit.
  - 2) Gas monitoring devices ~~shall~~must be placed around the unit at locations and elevations capable of detecting migrating gas from the ground surface to the lowest elevation of the liner system or the top elevation of the groundwater, whichever is higher.

- 3) A predictive gas flow model may be utilized to determine the optimum placement of monitoring points required for making observations and tracing the movement of gas.
  - 4) Gas monitoring devices ~~shall~~must be constructed from materials that will not react with or be corroded by the landfill gas.
  - 5) Gas monitoring devices ~~shall~~must be designed and constructed to measure pressure and allow collection of a representative sample of gas.
  - 6) Gas monitoring devices ~~shall~~must be constructed and maintained to minimize gas leakage.
  - 7) The gas monitoring system ~~shall~~must not interfere with the operation of the liner, leachate collection system, or delay the construction of the final cover system.
  - 8) At least three ambient air monitoring locations ~~shall~~must be chosen and samples ~~shall~~must be taken no higher than 0.025 meter (1 inch) above the ground and 30.49m (100 feet) downwind from the edge of the unit or at the property boundary, whichever is closer to the unit.
- c) Monitoring Frequency.
- 1) All gas monitoring devices, including the ambient air monitors ~~shall~~must be operated to obtain samples on a monthly basis for the entire operating period and for a minimum of five years after closure.
  - 2) After a minimum of five years after closure, monitoring frequency may be reduced to quarterly sampling intervals.
  - 3) The sampling frequency may be reduced to yearly sampling intervals upon the installation and operation of a gas collection system equipped with a mechanical device such as a compressor to withdraw gas.
  - 4) Monitoring ~~shall~~must be continued for a minimum period of: thirty years after closure at MSWLF units, except as otherwise provided by subsections (c)(5) and (c)(6) of this Section; five years after closure at landfills, other than MSWLF units, which are used exclusively for disposing of wastes generated at the site; or fifteen years after closure at all other landfills regulated under this Part. Monitoring, beyond the minimum period, may be discontinued if the following conditions have been met for at least one year:

- A) The concentration of methane is less than five percent of the lower explosive limit in air for four consecutive quarters at all monitoring points outside the unit; and
  - B) Monitoring points within the unit indicate that methane is no longer being produced in quantities that would result in migration from the unit and exceed the standards of subsection (a)(1) of this Section.
- 5) The Agency may reduce the gas monitoring period at an MSWLF unit upon a demonstration by the owner or operator that the reduced period is sufficient to protect human health and environment.
- 6) The owner or operator of an MSWLF unit ~~shall~~ must petition the Board for an adjusted standard in accordance with Section 811.303, if the owner or operator seeks a reduction of the postclosure care monitoring period for all of the following requirements:
- A) Inspection and maintenance (Section 811.111);
  - B) Leachate collection (Section 811.309);
  - C) Gas monitoring (Section 811.310); and
  - D) Groundwater monitoring (Section 811.319).

BOARD NOTE: ~~Changes to~~ Those segments of this subsection (c) that relate to MSWLF units are derived from 40 CFR 258.61 ~~(1996)~~ (2002).

- d) Parameters to be Monitored.
- 1) All below ground monitoring devices ~~shall~~ must be monitored for the following parameters at each sampling interval:
    - A) Methane;
    - B) Pressure;
    - C) Oxygen; and
    - D) Carbon dioxide.
  - 2) Ambient air monitors ~~shall~~ must be sampled for methane only when the average wind velocity is less than ~~8~~ eight kilometers (five miles) per hour at a minimum of three downwind locations 30.49 meters (100 feet) from

the edge of the unit or the property boundary, whichever is closer to the unit.

- 3) All buildings within a facility ~~shall~~must be monitored for methane by utilizing continuous detection devices located at likely points where methane might enter the building.
- e) Any alternative frequencies for the monitoring requirement of subsection (c) of this Section for any owner or operator of an MSWLF that disposes of 20 tons of municipal solid waste per day or less, based on an annual average, must be established by an adjusted standard pursuant to Section 28.1 of the Act [415 ILCS 5/28.1] and Subpart D of 35 Ill. Adm. Code 106 104. Any alternative monitoring frequencies established under this subsection (e) ~~will~~ must fulfill the following requirements:
- 1) ~~Consider~~ They must consider the unique characteristics of small communities;
  - 2) ~~Take~~ They must take into account climatic and hydrogeologic conditions; and
  - 3) ~~Be~~ They must be protective of human health and the environment.

BOARD NOTE: ~~Subsection~~ This subsection (e) is derived from 40 CFR 258.23(e), ~~as added at 62 Fed. Reg. 40707 (July 29, 1997) (2004)~~.

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 811.314 Final Cover System

- a) The unit ~~shall~~must be covered by a final cover consisting of a low permeability layer overlain by a final protective layer constructed in accordance with the requirements of this Section, unless the Agency has issued an RD&D permit that allows the use of an innovative final cover technology pursuant to an adjusted standard issued under 35 Ill. Adm. Code 813.112(b), and that permit is in effect.
- b) Standards for the Low Permeability Layer.
  - 1) Not later than 60 days after placement of the final lift of solid waste, a low permeability layer ~~shall~~must be constructed.
  - 2) The low permeability layer ~~shall~~must cover the entire unit and connect with the liner system.
  - 3) The low permeability layer ~~shall~~must consist of any one of the following:

- A) A compacted earth layer constructed in accordance with the following standards:
- i) The minimum allowable thickness ~~shall~~must be 0.91 meter (3 feet); and
  - ii) The layer ~~shall~~must be compacted to achieve a permeability of  $1 \times 10^{-7}$  centimeters per second and minimize void spaces.
  - iii) Alternative specifications may be utilized provided that the performance of the low permeability layer is equal to or superior to the performance of a layer meeting the requirements of subsections (b)(3)(A)(i) and (b)(3)(A)(ii) of this Section.
- B) A geomembrane constructed in accordance with the following standards:
- i) The geomembrane ~~shall~~must provide performance equal or superior to the compacted earth layer described in subsection (b)(3)(A) of this Section.
  - ii) The geomembrane ~~shall~~must have strength to withstand the normal stresses imposed by the waste stabilization process.
  - iii) The geomembrane ~~shall~~must be placed over a prepared base free from sharp objects and other materials ~~which that~~ may cause damage.
- C) Any other low permeability layer construction techniques or materials, provided that they provide equivalent or superior performance to the requirements of this subsection (b).
- 4) For an MSWLF unit, subsection (b)(3) of this Section notwithstanding, if the bottom liner system permeability is lower than  $1 \times 10^{-7}$  cm/sec, the permeability of the low permeability layer of the final cover system ~~shall~~ must be less than or equal to the permeability of the bottom liner system.
- c) Standards for the Final Protective Layer.
- 1) The final protective layer ~~shall~~must cover the entire low permeability layer.



- 2) The thickness of the final protective layer ~~shall~~must be sufficient to protect the low permeability layer from freezing and minimize root penetration of the low permeability layer, but ~~shall~~must not be less than 0.91 meter (3 feet).
  - 3) The final protective layer ~~shall~~must consist of soil material capable of supporting vegetation.
  - 4) The final protective layer ~~shall~~must be placed as soon as possible after placement of the low permeability layer to prevent desiccation, cracking, freezing, or other damage to the low permeability layer.
- d) Any alternative requirements for the infiltration barrier in subsection (b) of this Section for any owner or operator of an MSWLF that disposes of 20 tons of municipal solid waste per day or less, based on an annual average, must be established by an adjusted standard pursuant to Section 28.1 of the Act [415 ILCS 5/28.1] and Subpart D of 35 Ill. Adm. Code 406 104. Any alternative requirements established under this subsection must fulfill the following requirements:
- 1) ~~Consider~~They must consider the unique characteristics of small communities;
  - 2) ~~Take~~They must take into account climatic and hydrogeologic conditions; and
  - 3) ~~Be~~They must be protective of human health and the environment.

BOARD NOTE: Subsection (b)(4) of this Section is derived from 40 CFR 258.60(a) ~~(1996)~~ (2004). Subsection (d) of this Section is derived from 40 CFR 258.60(b)(3), ~~as added at 62 Fed. Reg. 40707 (July 29, 1997)~~ (2004). Those segments of subsection (a) of this Section that relate to RD&D permits are derived from 40 CFR 258.4(b) (2004).

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 811.Appendix B State-Federal MSWLF Regulations Correlation Table

RCRA SUBTITLE D REGULATIONS	ILLINOIS LANDFILL REGULATIONS
I. SUBPART A: General	
1) Purpose, Scope, and Applicability (40 CFR 258.1)	1) NL <sup>1</sup> : Sections 811.101, 811.301, 811.401, 811.501, and 811.700. EL <sup>2</sup> : Section 814.101.
2) Definitions (40 CFR 258.2)	2) Section 810.103.

3)	<u>Research, Development, and Demonstration Permits (40 CFR 258.4)</u>	3)	<u>Sections 811.103(b)(1) and (b)(2), 811.107(m)(1)(C), 811.314(a), and 813.112.</u>
II. SUBPART B: Location Restrictions			
1)	Airport safety (40 CFR 258.10)	1)	NL <sup>1</sup> : Section 811.302(e). EL <sup>2</sup> : Section 814.302(c) and 814.402(c).
2)	Floodplains. (40 CFR 258.11)	2)	NL <sup>1</sup> : Section 811.102(b). EL <sup>2</sup> : Section 814.302 and 814.402.
3)	Wetlands. (40 CFR 258.12)	3)	NL <sup>1</sup> : Sections 811.102(d), 811.102(e), and 811.103. EL <sup>2</sup> : Section 814.302 and 814.402.
4)	Fault areas. (40 CFR 258.13)	4)	NL <sup>1</sup> : Sections 811.304 and 811.305. EL <sup>2</sup> : Section 814.302 and 814.402.
5)	Seismic impact zones. (40 CFR 258.14)	5)	Same as above.
6)	Unstable areas. (40 CFR 258.15)	6)	NL <sup>1</sup> : Sections 811.304 and 811.305. EL <sup>2</sup> : Sections 811.302(c) and 811.402(c).
7)	Closure of existing MSWL units. (40 CFR 258.16)	7)	EL <sup>2</sup> : Sections 814.301 and 814.401.
III. SUBPART C: Operating Criteria			
1)	Procedures for excluding the receipt of hazardous waste. (40 CFR 258.20)	1)	NL <sup>1</sup> : Section 811.323. EL <sup>2</sup> : Sections 814.302 and 814.402.
2)	Cover material requirements. (40 CFR 258.21)	2)	NL <sup>1</sup> : Section 811.106. EL <sup>2</sup> : Sections 814.302 and 814.402.
3)	Disease vector control. (40 CFR 258.22)	3)	NL <sup>1</sup> : Section 811.107(i). EL <sup>2</sup> : Sections 814.302 and 814.402.
4)	Explosive gas control. (40 CFR 258.23)	4)	NL <sup>1</sup> : Sections 811.310, 811.311, and 811.312. EL <sup>2</sup> : Sections 814.302 and 814.402.
5)	Air criteria. (40 CFR 258.24)	5)	NL <sup>1</sup> : Sections 811.107(b), 811.310,

			and 811.311. EL <sup>2</sup> : Sections 814.302 and 814.402.
6)	Access requirements. (40 CFR 258.25)	6)	NL <sup>1</sup> : Section 811.109. EL <sup>2</sup> : Sections 814.302 and 814.402.
7)	Run-on/run-off control system. (40 CFR 258.26)	7)	NL <sup>1</sup> : Section 811.103. EL <sup>2</sup> : Sections 814.302 and 814.402.
8)	Surface water requirements. (40 CFR 258.27)	8)	Same as above.
9)	Liquids restrictions. (40 CFR 258.28)	9)	NL <sup>1</sup> : Section 811.107(m). EL <sup>2</sup> : Sections 814.302 and 814.402.
10)	Recordkeeping requirements. (40 CFR 258.29)	10)	NL <sup>1</sup> : Sections 811.112, and Parts 812 and 813. EL <sup>2</sup> : Sections 814.302 and 814.402.
IV.	SUBPART D: Design criteria (40 CFR 258.40)	IV)	NL <sup>1</sup> : 811.303, 811.304, 811.305, 811.306, 811.307, 811.308, 811.309, 811.315, 811.316, 811.317, and 811.Subpart E. EL <sup>2</sup> : Sections 814.302 and 814.402.
V.	SUBPART E: Groundwater Monitoring and Corrective Action		
1)	Applicability.	1)	NL <sup>1</sup> : 35 Section 811.319(a)(1). EL <sup>2</sup> : Sections 814.302 and 814.402.
2)	Groundwater monitoring systems. (40 CFR 258.51)	2)	NL <sup>1</sup> : Sections 811.318 and 811.320(d). EL <sup>2</sup> : Sections 814.302 and 814.402.
3)	Groundwater sampling and analysis. (40 CFR 258.53)	3)	NL <sup>1</sup> : Section 811.318(e), 811.320(d), 811.320(e). EL <sup>2</sup> : Sections 814.302 and 814.402.
4)	Detection monitoring program. (40 CFR 258.54)	4)	NL <sup>1</sup> : Section 811.319(a). EL <sup>2</sup> : Sections 814.302 and 814.402.
5)	Assessment monitoring program. (40 CFR 258.55)	5)	NL <sup>1</sup> : Section 811.319(b). EL <sup>2</sup> : Sections 814.302 and 814.402.
6)	Assessment of corrective measures. (40 CFR 258.56)	6)	NL <sup>1</sup> : Sections 811.319(d) and 811.324. EL <sup>2</sup> : Sections 814.302 and 814.402.

- |                                              |                                                                  |    |                                                                                                          |
|----------------------------------------------|------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------|
| 7)                                           | Selection of remedy. (40 CFR 258.57)                             | 7) | NL <sup>1</sup> : Sections 811.319(d) and 811.325.<br>EL <sup>2</sup> : Sections 814.302 and 814.402.    |
| 8)                                           | Implementation of the corrective action program. (40 CFR 258.58) | 8) | NL <sup>1</sup> : Sections 811.319(d) and 811.325.<br>EL <sup>2</sup> : Sections 814.302 and 814.402.    |
| VI. SUBPART F: Closure and Post-Closure Care |                                                                  |    |                                                                                                          |
| 1)                                           | Closure criteria. (40 CFR 258.60)                                | 1) | NL <sup>1</sup> : Sections 811.110, 811.315 and 811.322. EL <sup>2</sup> : Sections 814.302 and 814.402. |
| 2)                                           | Post-closure care requirements. (40 CFR 258.61)                  | 2) | NL <sup>1</sup> : Section 811.111. EL <sup>2</sup> : Sections 814.302 and 814.402.                       |
| VII. SUBPART G: Financial Assurance Criteria |                                                                  |    |                                                                                                          |
| 1)                                           | Applicability and effective date. (40 CFR 258.70)                | 1) | NL <sup>1</sup> : Section 811.700. EL <sup>2</sup> : Sections 814.302 and 814.402.                       |
| 2)                                           | Financial assurance for closure. (40 CFR 258.71)                 | 2) | NL <sup>1</sup> : Sections 811.701 through 811.705. EL <sup>2</sup> : Sections 814.302 and 814.402.      |
| 3)                                           | Financial assurance for post-closure. (40 CFR 258.72)            | 3) | Same as (2).                                                                                             |
| 4)                                           | Financial assurance for corrective action. (40 CFR 258.73)       | 4) | Same as (2).                                                                                             |
| 5)                                           | Allowable mechanisms. (40 CFR 258.74 and 258.75)                 | 5) | NL <sup>1</sup> : Section 811.706 through 811.720. EL <sup>2</sup> : Sections 814.302 and 814.402.       |

1 - NL: New Landfill; 2 - EL: Existing Landfill and Lateral Expansions.

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 813  
 PROCEDURAL REQUIREMENTS FOR PERMITTED LANDFILLS

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813.102	Delivery of Permit Application
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Section	
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## 813.504 Annual Report

AUTHORITY: Implementing Sections 5, 21, 21.1, 22, 22.17 and 28.1, and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1 and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15814, effective September 18, 1990; amended in R92-19 at 17 Ill. Reg. 12409, effective July 19, 1993; expedited correction at 18 Ill. Reg. 7501, effective July 19, 1993; amended in R90-26 at 18 Ill. Reg. 12388, effective August 1, 1994; amended in R98-9 at 22 Ill. Reg. 11483, effective June 23, 1998; amended in R05-1 at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

NOTE: Capitalization indicates statutory language.

## SUBPART A: GENERAL PROCEDURES

## Section 813.101 Scope and Applicability

- a) This Subpart A contains the procedures to be followed by all applicants and the Agency for applications for permits required pursuant to Section 21(d) of the Environmental Protection Act (Act) (~~Ill. Rev. Stat. 1991, ch. 111 1/2, par. 1021(d)~~) [415 ILCS 5/21(d)] and 35 Ill. Adm. Code 811, 812, 814, and 817. The procedures in this Part apply to applications to issue a permit to develop and operate a landfill, to modify a permit, to renew an expired permit, ~~and~~ to conduct an experimental practice, and to issue an RD&D permit.
- b) All general provisions of 35 Ill. Adm. Code 810 apply to this Part.

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 813.110 Adjusted Standards to Engage in Experimental Practices

- a) Experimental practices are design, construction, and operation methods and techniques ~~which that~~ are not expressly authorized by, and whose employment cannot be demonstrated by the applicant to be in compliance with, Section 813.112 or 35 Ill. Adm. Code 811, 812, and 814. Experimental practices may be implemented only at permitted landfills.
- b) Pursuant to Section 28.1 of the Act [415 ILCS 5/28.1] and Subpart D of 35 Ill. Adm. Code ~~106.Subpart G 104,~~ any person may, at any time, petition the Board for an adjusted standard to any standard in 35 Ill. Adm. Code 811, 812, or 814 in order to engage in an experimental practice at a permitted landfill in accordance with the requirements of this Section.
- c) The petition for adjusted standard ~~shall~~ must contain the following information in addition to that required by Subpart D of 35 Ill. Adm. Code ~~106.Subpart G 104.~~ However, if the applicant believes that any of the information required by this

Section is inapplicable, the applicant may so state provided that the petition contains an explanation of the inapplicability.

- 1) A narrative description of the experiment, describing the necessity of this experiment and an assessment of the expected outcome of this experiment;
  - 2) A list of all standards in 35 Ill. Adm. Code 811 that must be adjusted in order to conduct the experiment and a reason why each standard must be adjusted;
  - 3) A description of the monitoring program (see 35 Ill. Adm. Code 811) to be implemented during the experiment;
  - 4) Criteria for evaluating the experimental practice. The criteria ~~shall~~must be specific enough to allow the Agency to evaluate the performance of the experimental practice from the monitoring results pursuant to subsection (f)(1) of this Section;
  - 5) A description of the methods to be implemented and the total costs to restore the facility to compliance with all standards in 35 Ill. Adm. Code 811, 812, or 814 if the experiment is determined to be a failure. The methods must be feasible with existing methods in use; and
  - 6) The time period requested in which to conduct the experiment and documentation to show that this is the shortest practical time period in which success or failure can be determined.
- d) The Board will review all petitions to conduct experimental practices submitted in accordance with subsection (b) of this Section, Section 28.1 of the Act [415 ILCS 5/28.1], or Subpart D of 35 Ill. Adm. Code 106. ~~Subpart G 104~~ and an Agency recommendation regarding the experimental practice under the following assumptions:
- 1) There is no way in which to conduct the experiment in compliance with all requirements of 35 Ill. Adm. Code 811, 812 or 814;
  - 2) The experiment will be conducted in as short a time as possible if the information submitted in the petition and the Agency recommendation are not in conflict;
  - 3) A monitoring plan to evaluate the experiment will be implemented; and
  - 4) The site of the experiment will be restored to meet all requirements of 35 Ill. Adm. Code 811, 812, or 814, should the experiment fail.
- e) Implementation of the Experimental Practice.

Upon approval of the experimental practice pursuant to subsection (d) of this Section by the Board, the operator ~~shall~~ must file an application for significant modification of the permit with the Agency pursuant to Subpart B of Section 813. ~~Subpart B~~. The application ~~shall~~ must contain the following information:

- 1) Detailed designs of all items to be constructed for use during the experiment;
  - 2) The monitoring plan to be implemented during the experiment;
  - 3) A plan for decommissioning and closing the experiment;
  - 4) A time schedule for constructing the necessary items and closing, removing, and stabilizing the area upon completion of the experiment;
  - 5) An emergency cleanup plan describing the methods to be used to restore the facility to compliance with all standards in 35 Ill. Adm. Code 811 if the experiment is unsuccessful;
  - 6) Cost estimates and financial assurance (see Subpart G of 35 Ill. Adm. Code 811. ~~Subpart G~~) in an amount equal to the costs necessary to restore the facility to compliance with Chapter I of 35 Ill. Adm. Code. ~~Chapter I~~.
- f) Evaluation of Experimental Practice.
- 1) After completion of the experiment, all monitoring data ~~shall~~ must be submitted to the Agency for evaluation of the experimental practice in accordance with the evaluation criteria included in the adjusted standard petition in accordance with subsection (c)(4) of this Section. The Agency ~~shall~~ must determine if the experimental practice is acceptable for implementation pursuant to Section 39 of the Act [415 ILCS 5/39], and the following additional criteria:
    - A) An experimental practice ~~shall~~ must be considered acceptable for implementation if the monitoring results meet or exceed the evaluation criteria included in the adjusted standard petition in accordance with subsection (c)(4) of this Section; and
    - B) If the experiment does not cause or contribute to a violation of the Act [415 ILCS 5] or Chapter I of 35 Ill. Adm. Code. ~~Chapter I~~.
  - 2) Upon completion of the experiment and an Agency determination that the experimental practice is acceptable for implementation, the Agency ~~shall~~ must return the financial assurance instrument to the operator and, ~~shall~~ must approve permit modifications allowing the operation of the



experimental practice. If the experimental practice is determined to be unacceptable for implementation, then the Agency ~~shall~~must return the financial assurance instrument when the facility has been restored to comply with Chapter I of 35 Ill. Adm. Code:Chapter I.

(Source: Amended at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 813.112 Research, Development, and Demonstration Permits for MSWLFs

- a) Except as provided in subsection (f) of this Section, and subject to the limitations of subsections (c) through (e) of this Section, the Agency must issue a research, development, and demonstration (RD&D) permit for a new MSWLF unit, existing MSWLF unit, or lateral expansion, for which the owner or operator proposes to utilize innovative and new methods that deviate from either or both of the following standards, provided the Agency has determined that the MSWLF unit has a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate on the liner and that the innovative and new methods will not cause contamination of groundwater or surface water:
- 1) The run-on control systems in 35 Ill. Adm. Code 811.103(b)(1) and (b)(2); and
  - 2) The liquids restrictions in 35 Ill. Adm. Code 811.107(m)(1).
- b) The Agency must issue a research, development, and demonstration permit for a new MSWLF unit, existing MSWLF unit, or lateral expansion for which the owner or operator proposes to utilize innovative and new methods that deviate from the final cover standards of 35 Ill. Adm. Code 811.314(b) and (c) provided the Agency has determined that the MSWLF unit owner or operator has demonstrated that the infiltration of liquid through the alternative cover system will not cause contamination of groundwater or surface water or cause leachate depth on the liner to exceed 30-cm.
- c) Any RD&D permit issued under this Section must include such terms and conditions as are at least as protective as the MSWLF standards of 35 Ill. Adm. Code 811.103(b)(1) and (b)(2), 811.107(m)(1), and 811.314(b) and (c) from which the deviation is granted to assure protection of human health and the environment. Such a permit must include the following conditions:
- 1) It must provide for the construction and operation of such facilities as are necessary, for not longer than three years, unless the permit is renewed as provided in subsection (e) of this Section;
  - 2) It must provide that the MSWLF unit must receive only those types and quantities of municipal solid waste and non-hazardous wastes that the

Agency has deemed appropriate for the purposes of determining the efficacy and performance capabilities of the technology or process;

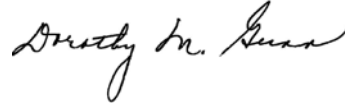
- 3) It must include such requirements as are necessary to protect human health and the environment, including such requirements as are necessary for testing and providing information to the Agency with respect to the operation of the facility;
  - 4) It must require the owner or operator of a MSWLF unit permitted under this Section to submit an annual report to the Agency showing whether and to what extent the site is progressing in attaining project goals. The report will also include a summary of all monitoring and testing results, as well as any other operating information specified by the Agency in the permit; and
  - 5) It must require compliance with all standards in 35 Ill. Adm. Code 811, except as permitted under this Section.
- d) The Agency may request in writing that the owner or operator immediately terminate all operations at the facility permitted under this Section or request that the owner or operator undertake other corrective measures at any time the Agency has reason to believe that the overall goals of the project are not being attained, including protection of human health or the environment. The Agency or any person may file an enforcement action pursuant to Section 41 of the Act [415 ILCS 5/41] for any violations of the Act [415 ILCS 5].
- e) No permit issued under this Section may exceed three years in duration, and no single renewal of a permit under this Section may exceed three years in duration.
- 1) The total term for a permit for a project including renewals may not exceed twelve years; and
  - 2) During permit renewal, the applicant must provide a detailed assessment of the project showing the status with respect to achieving project goals, a list of problems and status with respect to problem resolutions, and any other requirements that the Agency determines are necessary for permit renewal.
- f) Small MSWLF units. An owner or operator of a MSWLF unit that disposes of 20 tons of municipal solid waste per day or less, based on an annual average, is not eligible for an RD&D permit under this Section with regard to the standards of 35 Ill. Adm. Code 811.314(b) and (c), except in accordance with 35 Ill. Adm. Code 811.314(d).

BOARD NOTE: This Section is derived from 40 CFR 258.4 (2004).

(Source: Added at 29 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on March 17, 2005, by a vote of 5-0.

A handwritten signature in cursive script that reads "Dorothy M. Gunn".

Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board+