

ILLINOIS POLLUTION CONTROL BOARD

July 10, 1997

IN THE MATTER OF:)
)
PETITION OF SOUTHERN ILLINOIS) AS 97-8
REGIONAL LANDFILL, INC. (SIRL) FOR) (Adjusted Standard - Land)
AN ADJUSTED STANDARD FROM 35 ILL.)
ADM. CODE 811.309)

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

This matter comes before the Board upon the petition for an adjusted standard filed by Southern Illinois Regional Landfill, Inc. (SIRL) on April 15, 1997. The petition applies to SIRL's municipal and special non-hazardous waste landfill located in Jackson County, Illinois (Landfill). The requested adjusted standard is intended to facilitate construction and operation of a constructed wetlands treatment system to treat leachate from the Landfill. Based upon the record before it, the Board finds that SIRL has demonstrated that grant of an adjusted standard from 35 Ill. Adm. Code 811.309 is warranted.

JURISDICTION AND PROCEDURE

The Board's jurisdiction and authority in this matter arise from the Environmental Protection Act, 415 ILCS 5/1 *et seq.* (1996) (Act). The Board is charged therein to "determine, define and implement the environmental control standards applicable in the State of Illinois," Section 5(b), and to "grant . . . an adjusted standard for persons who can justify such an adjustment," Section 28.1(a). More generally, the Board's responsibility in this matter is based on the system of checks and balances integral to Illinois environmental governance: the Board is charged with the rulemaking and principal adjudicatory functions, while the Illinois Environmental Protection Agency (Agency or IEPA) has the principal administrative duties.

Section 28.1 of the Act provides that a petitioner may request, and the Board may impose, an environmental standard that is different from the standard that would otherwise apply to the petitioner as the consequence of the operation of a rule of general applicability, i.e., an "adjusted standard." The Act provides, in Section 28.1(d)(3), that "the Agency shall participate in [adjusted standard] proceedings." On April 28, 1997, the Agency filed the "Illinois Environmental Protection Agency's Response to Petition for Adjusted Standard," in which it recommends that the Board grant SIRL's petition.

SIRL waived hearing in this matter pursuant to 35 Ill. Adm. Code 106.705(j). A "Certificate of Publication" filed by SIRL on May 5, 1997, reflects that a public notice of SIRL's petition was published in a newspaper of general circulation in the region surrounding the Landfill on April 18, 1997. The notice included a statement that any party could request a hearing within 21 days after the date of publication. No other person requested a hearing, and accordingly no hearing was held. On May 16, 1997, SIRL filed with the Board its "Request for Expedited

Ruling,” in which it was suggested that prompt approval of the proposed adjusted standard could permit construction of the constructed wetland treatment system during this construction season.

BACKGROUND

As a landfill operator, SIRL is required under 35 Ill. Adm. Code 809.311(a) to collect and dispose of leachate¹ during the Landfill’s active life and subsequent post-closure period. SIRL is currently permitted to transport and dispose of leachate at publicly-owned treatment works in Cairo, Illinois and St. Louis, Missouri. SIRL proposes to utilize a constructed wetlands treatment system (CWTS), which would be a part of the Landfill facility, to treat leachate from the Landfill. The CWTS is an experimental system, and SIRL’s would be the first in this state. In its petition, SIRL describes the CWTS as follows:

SIRL proposes to utilize a constructed wetlands treatment system (CWTS) to treat landfill leachate. The proposed treatment system for this application is based on an average leachate flow of 40,000 gpd over the landfill's active life and post-closure period, and is composed of four unit operations:

1. Reed Bed
2. Constructed Wetland
3. Storage Lagoon
4. Land Application

The proposed CWTS will only handle waste generated by SIRL or by facilities owned, operated and controlled by SIRL. The effluent from the proposed treatment system will then be discharged to a land application unit, with no direct discharge to the waters of the state. Each part of this treatment system provides complementary treatment, and when all the plant communities are established, the system should meet or exceed all relevant regulatory requirements. At this point, pretreatment or stabilization of the leachate prior to discharge to the CWTS does not appear to be necessary. An appropriate pretreatment/stabilization system will be installed if its need is demonstrated in the course of the experiment.

(Petition at p. 1.)

Initially, the CWTS was proposed as part of a significant modification application which SIRL filed with the Agency. At pre-submittal meetings between SIRL and the Agency, it was determined that 35 Ill. Adm. Code 811, *inter alia*, applied to SIRL’s proposal. Section 811.309

¹ Leachate is defined in 35 Ill. Adm. Code 810.103 as a “liquid which has been or is in direct contact with a solid waste.”

governs leachate treatment and disposal systems. Section 811.309 specifically mentions three possible means of disposing of leachate: discharge into waters of the state (Section 811.309(c)(5)), discharge to an offsite treatment works (Section 811.309(e)), and recirculation of leachate back into the landfill (Section 811.309(f)). There is no mention in Section 811.309 of the disposal method proposed by SIRL: land application of treated leachate. So, while the Agency has issued a permit to SIRL, the permit contains the following condition:

Pursuant to 35 IAC [sic], Section 811.309(h)(1), leachate from this landfill shall be collected and disposed beginning as soon as it is first produced and continuing for at least five years after closure. Collection and disposal of leachate may cease only when the conditions described in 35 IAC [sic], Section 811.309(h)(2) have been achieved. The wetlands proposed for leachate treatment in application Log No. 1994-176 is an experimental practice and must obtain an adjusted standard in accordance with 35 IAC [sic]813.110 prior to submitting an application.

(Emphasis added.) SIRL through its petition seeks the adjusted standard required by the quoted permit condition.

REQUIREMENTS FOR EXPERIMENTAL PRACTICE

Because SIRL seeks an adjusted standard for an experimental practice, the special provisions for experimental practices found at 35 Ill. Adm. Code 813.110 come into effect. Under those provisions, a Petition seeking an adjusted standard to facilitate an experimental practice is required to include additional information beyond that generally required in an adjusted standard petition. The additional information required is set forth in 35 Ill. Adm. Code 813.110(c), which provides:

- c) The petition for adjusted standard shall contain the following information in addition to that required by 35 Ill. Adm. Code 106 Subpart G. * * *
 - 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 . . . to be implemented during the experiment;

- 4) Criteria for evaluating the experimental practice. The criteria shall be specific enough to allow the Agency to evaluate the performance of the experimental practice from the monitoring results . . . ;
- 5) A description of the methods to be implemented and the total costs to restore the facility in compliance with all standards of 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.

SIRL's petition contains the information required by Sections 813.110(c)(1) through (6). The Board thus proceeds to consider the merits of SIRL's petition.

ANALYSIS OF PETITION FOR ADJUSTED STANDARD

Statutory Criteria For Grant Of Adjusted Standard

The general procedures that govern an adjusted standard proceeding are found in Section 28.1 of the Act and in the Board's procedural rules at 35 Ill. Adm. Code 106. Section 813.110(d) directs the Board to review SIRL's petition in accordance with these provisions and the Agency's recommendation. Because the standard from which SIRL seeks an adjustment does not specify a level of justification or other requirement for an adjusted standard, the Board applies the criteria set forth in Section 28.1(c) of the Act, which provides:

- c. If a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by the petitioner, that:
 1. factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to the petitioner;
 2. the existence of those factors justifies an adjusted standard;

3. the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and
4. the adjusted standard is consistent with any applicable federal law.

We therefore review the information in SIRL's petition and the Agency's response to determine whether the proposed adjusted standard satisfies the listed criteria.

Significantly Different Factors

The CWTS is a new and experimental system, which has not heretofore been used in Illinois. At the time that Section 811.309 was adopted, the Board did not consider the use of constructed wetlands to process landfill leachate, or the land application of the processed leachate. See In re Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills (Aug. 17, 1990), R88-7. The Board accordingly finds that factors relating to SIRL are significantly different than those considered by the Board in adopting Section 811.309.

Justification for Adjusted Standard

In addition to the information requirements set forth in 35 Ill. Adm. Code 813.110(c) discussed above, Section 813.110 also requires that the Board make four assumptions when reviewing adjusted standard petitions involving experimental practices. The first assumption, in Section 813.110(d)(1), is that "[t]here is no way in which to conduct the experiment in compliance with all requirements of 35 Ill. Adm. Code 811, 812 or 814[.]" It follows from this assumption that SIRL cannot conduct its experimental procedure without an adjusted standard. Accordingly, the Board finds that an adjusted standard is justified in this case.

Environmental or Health Effects

The proposed adjusted standard involves only approval of a mechanism for disposal of leachate, and has no effect on the protective measures required for any leachate treatment system or the standards to be met in any ground application of wastewater and/or sludge. Indeed, SIRL and the Agency have specifically agreed that all otherwise applicable provisions of 35 Ill. Adm. Code 811, 372, and 391, as well as the Illinois Groundwater Protection Standards, will apply to the CWTS. The Board further notes that in its petition, SIRL describes a number of specific characteristics of the CWTS designed to ensure the system's integrity, including:

- a. The constructed wetlands and storage ponds will be lined with the same composite clay and geosynthetic liners as the Landfill;
- b. A monitoring system will be implemented which will include analysis of groundwater (from at least three wells), soils in the irrigation site, plant tissues in

the area, and influent to and effluent from the treatment units, to ensure compliance with all applicable standards; and

- c. A contingency plan in the event the experiment is determined to be a failure, under which liquid wastes and affected soils would be disposed of using currently available resources.

The Board accordingly finds that the requested adjusted standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting Section 811.309.

Consistency with Federal Law

The Board accepts the Agency's representation that the proposed adjusted standard is consistent with applicable federal law.

CONCLUSION

SIRL seeks an adjusted standard pursuant to Section 813.110: Adjusted Standards to Engage in Experimental Practices. SIRL has satisfied the information requirements contained therein. SIRL proposes to treat and dispose of the leachate from its Landfill using a natural system, i.e., the wetlands system described in its Petition and above in this opinion. Since this is a treatment system not identified in Section 811.309, the Agency directed SIRL to obtain approval for this system pursuant to Section 813.110. According to SIRL and the Agency, the CWTS described in the Petition is a new method which has not been constructed or used elsewhere in the state. SIRL and the Agency agree that the CWTS will operate in accordance with the Board's regulations governing land application of wastewater (Part 372), land application of sludge (Part 391), Class II groundwater standards (Section 620.420), and the standards for new solid waste landfills (Part 811). Thus, SIRL does not need an adjusted standard from any specific Board regulation. Rather SIRL needs to provide the Board with the information required pursuant to Section 813.110(c), so the Board can determine whether the experimental practice it seeks to construct and operate satisfies the criteria set forth at Section 28.1 of the Act. As noted above, SIRL has satisfied the information requirements of Section 813.110(c).

In critical part, Section 28.1 of the Act requires that the adjusted standard will not result in environmental or health effects substantially more adverse than the rule of general applicability. The regulations do not specifically address the experimental practice proposed by SIRL. However, the Agency and SIRL have identified the Board regulations that will be applicable to the treatment and disposal methods used in the CWTS. They agree that those methods will allow SIRL to comply with those regulations. Based on the record, the Board finds that the experimental practice proposed by SIRL, the CWTS, satisfies the requirements of Section 28.1 of the Act and Section 813.110 of the Board's regulations.

For the reasons stated in this opinion, the Board finds that SIRL has demonstrated that grant of the requested adjusted standard is warranted. This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

Southern Illinois Regional Landfill, Inc., is hereby granted an adjusted standard from 35 Ill. Adm. Code 811.309 as follows:

Adjusted Standard

In lieu of the methods of leachate collection and disposal provided for in 35 Ill. Adm. Code 811.309, Southern Illinois Regional Landfill (“SIRL”) shall be permitted to utilize its proposed Constructed Wetlands Treatment System (“CWTS”) to treat and dispose of leachate from SIRL. The following conditions shall apply to this adjusted standard:

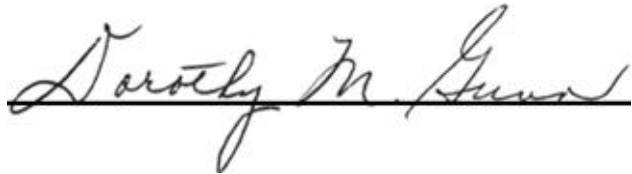
- 1) Prior to construction or operation of a CWTS, SIRL shall submit detailed design, operation and maintenance, monitoring, construction quality assurance, closure plan, and criteria for evaluating the success or failure of the CWTS to the Illinois Environmental Protection Agency (“IEPA”) in the form of an application for significant modification of permit;
- 2) If a CWTS is used to treat leachate from SIRL, then SIRL shall be required to comply with all applicable requirements of 35 Ill. Adm. Code Parts 811, 372, and 391;
- 3) SIRL shall monitor the influent and effluent of each component of the CWTS on a monthly basis for at least the first year of operation of the CWTS as described in the Water Quality Monitoring section of SIRL’s petition for an adjusted standard. After one year, if SIRL demonstrates that a reduced monitoring frequency is sufficient to protect human health and the environment, then IEPA may agree to reduce the monitoring requirements and/or frequency; and
- 4) The concentrations of the organic compounds contained within the effluent produced by the proposed CWTS shall not exceed the Illinois Groundwater Protection Standards for Class II groundwater found in 35 Ill. Adm. Code 620.420.

- 5) In the event that the CWTS does not provide leachate treatment and disposal in accordance with the applicable requirements, SIRL shall remove the leachate and associated liquid wastes from the wetlands and storage pond and dispose of the same by transport offsite for treatment. Further, SIRL shall exhume soils and sediments from the CWTS and dispose of the same on site in the Landfill.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of the date of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 145 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 10th day of July 1997, by a vote of 6-0.

A handwritten signature in cursive script, reading "Dorothy M. Gunn", written over a solid horizontal line.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board