

ILLINOIS POLLUTION CONTROL BOARD
September 18, 1997

PETITION OF:)
)
CARUS CHEMICAL COMPANY FOR AN) AS 98-1
ADJUSTED STANDARD FROM) (Adjusted Standard - Land)
35 ILL. ADM. CODE 814.SUBPART D)

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

On July 3, 1997, Carus Chemical Company (Carus) filed a petition¹ for an adjusted standard from the September 18, 1997 deadline for initiating closure applicable to Subpart D landfills found in the Board's regulations at 35 Ill. Adm. Code 814.401(a). Carus requests that it be granted an adjusted standard from 35 Ill. Adm. Code 814.Subpart D thereby allowing the remaining portions of Sections 3 and 4 of its Parcel 1 landfill to continue accepting waste for 18 months after the September 18, 1997 deadline, or until March 18, 1999. In the alternative, Carus proposes that it be granted an adjusted standard from 35 Ill. Adm. Code 814.Subpart C which would allow the remaining Sections 3 and 4 of Parcel 1 to remain open for an indefinite period beyond September 18, 1997. Carus seeks an adjusted standard for its facility in the Township of Ottawa, LaSalle County, Illinois. Carus waived hearing and no hearing in this matter was held.

On August 13, 1997, the Illinois Environmental Protection Agency (Agency) filed its response stating that, while it agreed with Carus' petition in every other aspect, it could not recommend approval of the adjusted standard because of the parties' disagreement on the merits of Carus performing a groundwater impact assessment. On August 19, 1997, Carus and the Agency filed a joint motion for proposed adjusted standard and for expedited decision. In their joint motion, the parties propose mutually agreeable language establishing the adjusted standard with conditions. The only issue on which the parties continue to disagree is whether Carus should perform a groundwater impact assessment as a condition of the adjusted standard. On August 20, 1997, Carus filed a motion for leave to file petitioner's reply to Agency's response. The Board hereby grants the parties' request for expedited decision and Carus' motion for leave to file its response. In its response, Carus reiterates its opposition to the Agency's recommendation that it perform a groundwater impact assessment.

Based upon the record before it and upon review of the factors involved in consideration of adjusted standards, the Board finds that Carus has demonstrated that grant of an adjusted standard is warranted. Accordingly, for reasons more fully set forth below, the Board hereby grants Carus an adjusted standard with conditions from 35 Ill. Adm. Code

¹ Carus' petition for adjusted standard will be referred to as Pet. at __; the Illinois Environmental Protection Agency's response will be referred to as Resp. at __; the parties' joint motion will be referred to as Joint Mot. at __; Carus' reply to the Illinois Environmental Protection Agency's response will be referred to as Rep. at __.

814.Subpart D of the Board's regulations. These conditions do not require Carus to perform a groundwater impact assessment in accordance with 35 Ill. Adm. Code 814.Subpart C.

DESCRIPTION OF LANDFILL

Carus owns and operates a chemical manufacturing facility in the City of LaSalle, LaSalle County, Illinois. Pet. at 3. Carus is one of the largest employers in the City of LaSalle. Pet. at 3. The Carus plant produces specialty chemicals; its primary product is potassium permanganate, which is an oxidant used to control taste, odor and color in the treatment of drinking water and wastewater, used mostly by municipalities and municipal water systems. Pet. at 3-4. Carus is the sole producer of potassium permanganate in the Western Hemisphere, with most of its competition coming from foreign producers. Pet. at 4. Carus is a charter member in the Partners in Pollution Prevention Program established by the Agency and, since 1988, Carus has been an active participant in Responsible Care, the Chemical Manufacturers Association's initiative to continually improve the chemical industry's responsible management of chemicals. Pet. at 4.

As a by-product of its manufacturing operations, Carus generates certain non-hazardous special wastes. Pet. at 4. Carus owns and operates the Carus landfill (landfill) located in Ottawa Township, LaSalle County, Illinois which manages and disposes of its special waste. Pet. at 4. Although LaSalle County is not currently zoned, all of the property surrounding the landfill has been used for other landfill operations or for agricultural use. Pet. at 4. There are no residential homes within at least one-quarter mile of the waste boundary of the landfill. Pet. at 4, Exhibit B. The Agency issued operating permit 1980-42-OP for the landfill in 1981. Pet. at 4. The landfill is identified as Agency Site No. 0990800015. Pet. at 4. The landfill is permitted to accept certain designated non-hazardous special wastes. Pet. at 4-5. The wastes disposed of at the landfill, primarily manganese dioxide and manganese hydroxide residues, are generated by Carus at its manufacturing plant located in the City of LaSalle. Pet. at 5.

The Carus landfill consists of two parcels, Parcel 1 and Parcel 2. Pet. at 5. Parcel 1 of the Carus landfill was divided into four separate operational sections for effective management of landfill operations. Pet. at 5. Section 1 of Parcel 1 of the facility was closed by September 18, 1992 as a 35 Ill. Adm. Code 814, Subpart E facility. Pet. at 5. Although there is a very small amount of remaining capacity in Section 2 of Parcel 1, Carus will initiate closure at this section by September 18, 1997 under 35 Ill. Adm. Code 814, Subpart D. Pet. at 5. Section 3, consisting of approximately 1.1 acres, is still operating, and has some remaining capacity that will not be completely used prior to September 18, 1997. In August 1995, Carus completed construction of Section 4 of Parcel 1, consisting of approximately .9 acres with a calculated design life of 2.0 years, and received Agency approval for waste acceptance beginning in October 1995. Pet. at 5, Exhibit A. Carus will not fill this final section of Parcel 1 to permitted limits by September 18, 1997. Pet. at 5. Parcel 2 is currently under construction but, due to unanticipated delays, will not be ready for waste acceptance by September 18, 1997. Pet. at 5, Exhibits A and C.

STATUTORY AND REGULATORY FRAMEWORK

The Board's responsibility in this matter arises from the Environmental Protection Act (Act). 415 ILCS 5/1 (1996). In determining whether an adjusted standard is to be granted, Section 28.1 of the Act (415 ILCS 5/28.1 (1996)) requires the Board to determine whether the petitioner has presented adequate proof of the following: that factors relating to the petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulations applicable to that petition; the existence of those factors justifies an adjusted standard; 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 the adjusted standard is consistent with any applicable with any federal law. 415 ILCS 5/28.1(c) (1996). In granting an adjusted standard, the Board may impose such conditions as may be necessary to accomplish the purposes of the Act. 415 ILCS 5/28.1(a) (1996).

In 1990, the Board promulgated more stringent design and operating standards applicable to both new and existing non-hazardous waste landfills. See In the Matter of: Development, Operation and Reporting Requirements for Non-Hazardous Waste Landfills (August 17, 1990), R88-7. Part 811 of the Board's landfill rules specifies standards for new landfills. In a nutshell, Part 814 of the Board's landfill rules establishes design and performance standards for various types of existing landfills and landfill units. The design and performance standards become stricter the longer a landfill is intended to remain in operation. With more Part 811 standards applicable to the part 814 facility, landfills subject to Section 814.Subpart C may remain open for more than seven years from the effective date of Part 814, *i.e.*, beyond September 18, 1997. Landfills subject to Subpart D must initiate closure within seven years of the effective date, *i.e.*, before September 18, 1997. Essentially, any landfill which seeks to remain in operation after September 18, 1997, must meet the requirements of Subpart C. The additional requirements contained in Subpart C (but not in Subpart D), include installation of a leachate drainage and collection system, a groundwater impact assessment, and compliance with the Part 811 groundwater quality standards at the edge of the regulatory zone of attenuation.²

More specifically, Carus requests an adjusted standard from the September 18, 1997 deadline for initiating closure applicable to Subpart D landfills found in the Board's regulations at 35 Ill. Adm. Code 814.401(a). That section provides the following:

² Section 810.103 defines zone of attenuation as a three-dimensional region formed by excluding the volume occupied by the waste placement from the smaller 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. In other words, the compliance point would be 100 feet from the edge of the unit or at the property line, whichever is closer.

Section 814.401 Scope and Applicability

- a) The standards in this Section are applicable to all existing units of landfills, including those exempt from permit requirements in accordance with Section 21(d) of the Act, that have accepted or accept chemical and putrescible wastes. Based on an evaluation of the information submitted pursuant to Subpart A and any Agency site inspection, units that meet the requirements of this Subpart shall initiate closure between two and seven years after the effective date of this Part.

In the alternative, Carus requests that the remainder of Sections 3 and 4 of Parcel 1 be redesignated as a Subpart C facility in accordance with 35 Ill. Adm. Code 814.301(a) so that Carus could continue to dispose of waste in the landfill after September 18, 1997. That section provides the following:

- a) The standards in this Subpart are applicable to all existing units of landfills, including those exempt from permit requirements in accordance with Section 21(d) of the Act, that have accepted or accept chemical and putrescible wastes. Based on an evaluation of the information submitted pursuant to Subpart A and any Agency site inspection, units that meet the requirements of this Subpart may remain open for an indefinite period of time beyond seven years after the effective date of this Part.

In the event the Board reclassifies the landfill as a Subpart C facility, Carus requests an adjusted standard from 35 Ill. Adm. Code 814.302(a)(5) regarding the performance of a groundwater impact assessment. That section provides the following:

Section 814.302 Applicable Standards

- a) All of the requirements for new units described in 35 Ill. Adm. Code 811 shall apply to units regulated under this Subpart except the following:
 - 5) The hydrogeological site investigation requirements of 35 Ill. Adm. Code 811.315, except that information shall be collected to implement a groundwater monitoring program in accordance with 35 Ill. Adm. Code 811.318 and 811.319 and establish background concentrations for the purpose of establishing water quality standards pursuant to 35 Ill. Adm. Code 811.320.

HISTORY OF CARUS' ADJUSTED STANDARD

On March 12, 1991, Carus filed Form LPC-PA15 with the Agency, pursuant to 35 Ill. Adm. Code 814.103. In that form, Carus predicted that, based on estimated annual volume of waste received and remaining capacity, Carus would initiate closure of the remainder of Sections 3 and 4 of Parcel 1 by September 18, 1997. In making this conclusion, Carus estimated that it would receive 12,500 cubic yards of process waste per year and estimated the remaining total capacity of the remainder of Section 3 and 4 of Parcel 1 to be 220,000 cubic yards. Pet. at 6. Of this total, Carus concluded that approximately 80,000 cubic yards related to Parcel 1, yielding approximately 6.4 years of remaining capacity after March 1991, i.e., until August 1997. Pet. at 6. Consequently, Carus estimated that the closure of the remaining sections of Parcel 1 would be initiated prior to September 18, 1997. Pet. at 6. Carus reports that these calculations were inaccurate: the remainder of Sections 3 and 4 of Parcel 1 currently has remaining capacity of more than one year. Pet. at 6.³

In addition to filing a notification of estimated date of closure pursuant to 35 Ill. Adm. Code 814.103, Carus also applied for a Significant Modification Permit (SMP) pursuant to 35 Ill. Adm. Code 814.104 in November 1991, for the remaining portions of Parcel 1 and for all of Parcel 2. Pet. at 7. The Agency issued Carus a SMP (No. 1991-365-LFM) for those remaining portions of Parcel 1 in October 1993. To obtain this permit, Carus demonstrated compliance with the applicable standards set forth in 35 Ill. Adm Code 814, which reference certain Part 811 standards for new facilities. Pet. at 7. At that time, the Agency designated Parcel 2 as a Subpart C facility. The Agency, however, designated all sections of Parcel 1 (including the remainder of Sections 3 and 4), except Section 1, as Subpart D facilities.

The SMP allows Carus to operate Parcel 2 of the landfill in compliance with the applicable requirements of 35 Ill. Adm. Code 811 through 813, as modified by Part 814.Subpart C, which allows for operation subsequent to September 18, 1997. Pet. at 7. Carus asserts that notwithstanding their designation as Subpart D landfill facilities, the remaining portion of Section 3 and all of Section 4 were designed and constructed to the identical technical standards approved for Parcel 2, i.e., a Subpart C landfill. Pet. at 7. Carus maintains that the design and construction of these remaining sections of Parcel 1 meets or exceeds the requirements of Subpart C. Pet. at 7.

PROPOSED LANGUAGE OF ADJUSTED STANDARD

Carus proposes an adjusted standard from 35 Ill. Adm. Code 814.Subpart D which requires that Carus close Sections 3 and 4 of Parcel 1 by September 18, 1997. An adjusted standard from Subpart D would allow the Carus landfill to continue accepting waste for disposal in the remaining unfilled portions of Section 3 and Section 4 of Parcel 1 only, for a

³ Carus believes this unanticipated remaining capacity at Parcel 1 may be in part due to optimization of operational procedures, but that it is mainly due to less stringent daily and intermediate cover requirements allowed for in Carus' Significant Modification Permit, issued subsequent to its March 1991, estimates. Pet. at 7.

period up to 18 months after September 18, 1997. Pet. at 9; Joint Mot. at 3. Carus notes that by virtue of applying for its SMP and its subsequent construction and operation of Sections 3 and 4 of Parcel 1, this facility already exceeds those requirements mandated by 35 Ill. Adm. Code 814.Subpart D. Therefore, Carus asserts that it should be granted an adjusted standard from 35 Ill. Adm. Code 814.Subpart D regulations.

In the alternative, Carus recommends that the Board grant it an adjusted standard from 35 Ill. Adm. Code 814.Subpart C. Carus argues it is entitled to an adjusted standard from 35 Ill. Adm. Code.Subpart C given that the remaining portions of Parcel 1 satisfy all requirements for Subpart C facilities, except possibly for one: the groundwater impact assessment model (35 Ill. Adm. Code 811.317). Pet. at 10. In support of this argument Carus notes that its engineer, Andrews Environmental Engineering, Inc., performed a groundwater impact assessment model for Parcel 2, and believes the results of groundwater impact assessment model, if performed for Parcel 1, would be comparable to results already generated for Parcel 2. Pet. at 10. Moreover, Carus believes that performing the model again for the remaining portion of Parcel 1 would be unnecessary to demonstrate any greater compliance with the Subpart C requirements than already shown. In addition, by virtue of applying for its SMP and its subsequent construction and operation of Sections 3 and 4 of Parcel 1, Carus already has expended the efforts necessary to achieve an adjusted standard from Subpart C regulations. Pet. at 11. Further, Carus maintains that the remaining portion of Section 3 and all of Section 4 of Parcel 1 are designed as state-of-the-art disposal areas, complete with a 5-foot compacted clay liner and leachate collection system, and meet or exceed all of the technical Subpart C requirements. Pet. at 9. Thus, under this alternative approach, Carus asserts that the remaining portions of Sections 3 and 4 of Parcel 1 should be redesignated as meeting Subpart C requirements, allowing those sections to remain open for an indefinite period of time beyond September 18, 1997.

The following is Carus' and the Agency's proposed language for the adjusted standard outlined in the parties' August 19, 1997, joint motion for proposed adjusted standard.

Notwithstanding Sections 814.301 and 814.401, Carus Chemical Company may continue to accept waste for disposal in the remaining portions of Parcel 1 of Carus Disposal Area No. 2 in LaSalle County, Illinois, based on the remaining portions of Parcel 1 meeting the minimum design criteria of Subpart C of Part 814 and Section 814.302 for non-MSWLF units, for a period of up to 18 months after September 18, 1997, pursuant to the terms of its existing operating permit, subject to the following conditions:

- (1) after the adjusted period of operation, Carus must commence closure of the facility pursuant to the standards set forth in Part 811 of these regulations and its permit; and
- (2) within 90 days after issuance of this adjusted standard, Carus shall submit as a permit modification to the Agency for review and approval a revised postclosure plan and postclosure cost

estimates, based on Sections 812.115, 812.116 and 814.402(b)(4), to account for the adjusted design period.

In addition to the language proposed above, the Agency recommends addition of the following language as an additional condition of issuance of the adjusted standard:

- (3) within 90 days after issuance of this adjusted standard, Carus shall submit as a permit modification to the Agency for review and approval a groundwater impact assessment model for Parcel 1, pursuant to Sections 811.317 and 811.318(c), except that the model need only be performed for the adjusted design period.

The parties have agreed upon language for a proposed adjusted standard, but disagree on whether the additional condition requiring a groundwater impact assessment model is necessary. Joint Mot. at 4. The parties also agree that the adjusted standard be made to Subpart D, but Carus notes that it would not object to issuance of the adjusted standard under either Subpart C or D, depending upon which subpart the Board finds more appropriate. Joint Mot. at 3-4.

JUSTIFICATION AND AGENCY RESPONSE

Carus asserts that an adjusted standard should be granted as it has adequately justified that such a standard is warranted in accordance with Section 28.1 of the Act. 415 ILCS 5/28.1 (1996).

Substantially Different Factors

Carus maintains that substantially different factors prevent it from complying with the rule of general applicability, *i.e.*, 35 Ill. Adm. Code 814, Subpart D. Carus argues that Board regulations require that existing disposal units must comply with the standards of 35 Ill. Adm. Code 814.302 of Subpart C to remain open beyond seven years after September 18, 1997. Pet. at 11-12. Carus asserts that the remaining portions of Sections 3 and 4 of Parcel 1 will not be filled to capacity by September 18, 1997, as was originally projected in 1991. Pet at 12. Carus asserts that although not required for a Subpart D facility, the remaining sections of Parcel 1 were designed and constructed and are being operated, with the exception of the groundwater impact assessment, identically to the design, construction, and operation plans for Parcel 2, which is already designated as a Subpart C facility. Pet. at 12. Based on the information submitted in its application for a SMP as well as on actual construction and operation, Carus believes that the remaining portion of Section 3 and all of Section 4 meet all of the technical requirements for Subpart C facilities. Pet. at 12. In addition, Carus believes that the remaining sections of Parcel 1 as well as Parcel 2 satisfy several standards for new Part 811 facilities that are not even required for existing non-municipal solid waste facilities under Subpart C of Part 814, such as foundation and mass stability analysis standards, and liner and leachate drainage and collection requirements. Pet. at 12.

The Agency agrees that factors relating to the Carus' situation are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation of applicability. Resp. at 6.

Justification for Adjusted Standard

Carus maintains that it has adequate justification for an adjusted standard because, despite its best efforts, it is unable to comply with 35 Ill. Adm. Code 814.Subpart D. Carus alleges that the only other option available is to comply with its current permit by ceasing all acceptance of waste by September 18, 1997, and thereafter achieving the permitted final contours, in order to provide optimum drainage, by use of earthen materials to fill the approximately 15,652 cubic yards of actual space remaining on September, 18, 1997. Pet. at 21. The cost of providing earthen materials to fill this space is estimated to be \$2 per cubic yard. Pet. at 21. Carus argues that after spending \$90,000 to design and construct Sections 3 and 4 of Parcel 1 to meet or exceed nearly all of the Subpart C standards, it would be required to use the remaining air space in Section 4 for earth instead of waste, and at a cost to Carus of more than \$31,000. Pet. at 21.

Carus argues that because of unanticipated delays, Parcel 2 will not be available for acceptance of waste until at least late November 1997, and possibly not until early Spring, 1998. Pet. at 21. Early closure of the remainder of Parcel 1 would force Carus to transport its special waste longer distances to commercial landfills, at a greater cost to Carus, and ultimately, to its customers. Pet. at 21. The cost to Carus of disposing of its special wastes at commercial landfills from September 18, 1997 until Parcel 2 is approved for waste acceptance would create an unnecessary financial burden. Pet. at 21. Carus estimates additional disposal costs of its special wastes (transport plus tipping fees) to be between \$20 to \$25 per cubic yard, or between approximately \$36,000 to \$45,000 per month, assuming a disposal rate of 1,800 cubic yards per month. Pet. at 22. Carus' current incremental disposal costs are approximately \$7.50 per cubic yard, or \$13,500 per month. Pet. at 22. Carus maintains that it would incur additional costs of between approximately \$22,500 to \$31,500 per month without the relief granted by the adjusted standard. Pet. at 22. Absent further construction delays or adverse conditions, Carus estimates that it would need commercial disposal of its waste for a period of between two to six months after September 18, 1997, at an additional cost of at least \$45,000 ($\$22,500 \times 2$ months) to \$189,000 ($\$31,500 \times 6$ months). Pet. at 22.

Carus concludes that the total additional cost to Carus to comply with the regulation of general applicability would range anywhere from at least \$76,000 to more than \$220,000. Pet. at 22. Carus argues, therefore, that the option of "premature" closure is not only an inadvisable use of its own secure landfill space and of commercial landfill space, but an unwise expenditure of money. Pet. at 22.

Furthermore, Carus asserts that it is also unable to achieve compliance with 35 Ill. Adm. Code 814.Subpart C. Carus does not dispute the fact that a groundwater impact assessment is required under 35 Ill. Adm. Code 814.Subpart C. Rep. 7. Carus notes that only a groundwater impact assessment specifically focused on Sections 3 and 4 of Parcel 1

prevents those sections from satisfying all Subpart C standards. Pet. at 20. Carus maintains that the cost to perform a groundwater impact assessment for the remaining sections of Parcel 1 in order to demonstrate compliance with the regulation of general applicability is estimated to exceed \$35,000, not including time and expense of meetings and further review with the Agency. Pet. at 20, Exhibits A and E. Carus asserts that the additional cost necessary to demonstrate such compliance is not justified, since the only sections to remain open for acceptance of waste beyond September 18, 1997, are effectively designed and constructed to meet or exceed applicable Subpart C technical standards. Pet. at 20.

Moreover, Carus relates that it has already spent \$90,000 more for the “over-design” and construction of Sections 3 and 4 of Parcel 1 than it would have had to under the Subpart D regulations, which costs do not include preparing and submitting the application for the SMP. Pet. at 20-21. As a result of this “over-design,” Carus states that the remainder of Sections 3 and 4 of Parcel 1 have an approved leachate collection system that meets the current 35 Ill. Adm. Code. 814.Subpart C standards. Rep. at 10. Carus also notes that a leachate collection system is not required under 35 Ill. Adm. Code 814.Subpart D. In addition, Carus states that the groundwater quality standards currently applicable to the remainder of Parcel 1 are more stringent than the maximum allowable predicted concentrations within the zone of attenuation. Rep. at 11. Carus notes that the compliance boundary for Parcel 1, which is designated as a Subpart D landfill, is at the edge of the unit.⁴ Finally, Carus asserts that the information submitted in its SMP application demonstrated that Parcel 1 met the applicable groundwater standards. Pet. at 14.

The Agency states that it does not support an adjusted standard that would redesignate Parcel 1 or any section of Parcel 1 as a Subpart C landfill authorized to accept waste for disposal for an indefinite period of time beyond September 18, 1997. Resp. at 10. The Agency notes that Carus has not demonstrated that Parcel 1 meets the standards of Part 814.Subpart C. Further, the Agency states that it cannot support the granting of an adjusted standard for a specific time period under Subpart D since Carus has not performed a groundwater impact assessment for Parcel 1. In this regard, the Agency notes that the groundwater impact assessment was not required for Parcel 1 of Carus’ landfill since it was permitted as a Subpart D landfill. Resp. at 6. However, the Agency contends that landfills which remain open beyond September 18, 1997, are required to meet the standards of Part 814.Subpart C and one of the standards is to perform a groundwater impact assessment in accordance with 35 Ill. Adm. Code 811.317.

With regards to Carus’ assertions that the results of any groundwater impact assessment, if performed for Parcel 1, would be comparable to results generated for Parcel 2, the Agency states that such assumption cannot be appropriately made. Resp. at 7. The Agency notes that sections of Parcel 1 that were constructed before the issuance of the significant modification permit in October 1993, were not designed in accordance with Part

⁴ Section 814.402(b)(3) sets forth that the compliance boundary for a Subpart D landfill as any point on the edge of the unit at or below the ground surface. A Subpart C landfill, which is required to comply with the Part 811 standards, is allowed to have a zone of attenuation.

814.Subpart C. In light of this, the Agency asserts that only a groundwater impact assessment performed for the adjusted design period would adequately demonstrate whether or not groundwater would be impacted by the landfill. Resp. at 7.

Impact on the Environment

Carus maintains that if it were to comply with the regulation of general applicability, there would be no more appreciable enhancement to the environment than if Carus were to comply with its proposed adjusted standard. Pet. at 18. Carus asserts that its proposed adjusted standard would have little, if any, qualitative or quantitative impact on human health, safety or the environment, inasmuch as it would call only for a continuation of activities already permitted and conducted for the Carus landfill, and scheduled to be conducted for several more years. Pet. at 18. The proposed adjusted standard, Carus maintains, would allow for disposal of a relatively small amount of homogenous wastes in a monofill with a compacted clay liner and leachate drainage and collection systems. Carus believes that this is more environmentally sound than disposal in Subpart D facilities and even in some Subpart C facilities that lack such systems. Pet. at 18. Design of Sections 3 and 4 of Parcel 1 are technically equivalent to the design of Parcel 2, for which Carus has already obtained a SMP as a Subpart C landfill. Pet. at 18.

Carus suggests that adoption of its proposed adjusted standard would result in several environmental benefits. First, Carus' continued use of its permitted capacity would preserve capacity remaining at other, commercial landfills in which Carus' wastes would otherwise be disposed, particularly since Parcel 2 will not be ready for waste placement until after September 18, 1997. Pet. at 19. Second, special waste permits and procedures are necessary for proper handling of Carus' waste streams. Pet. at 19. Carus alleges that many landfills may not be able to obtain the necessary authorizations. Pet. at 19. Finally, Carus asserts that there is a significant environmental benefit for Carus to continue disposing of its wastes in its current monofill, as opposed to a commercial landfill that may accept a variety of special wastes and municipal solid wastes. Pet. at 19. Carus explains that for its production size, it generates a substantial amount of special waste, anywhere between 12,000 and 22,000 cubic yards per year. Pet. at 19. Carus and its contractors employ specific waste handling practices to insure that its waste is properly and safely handled. Pet. at 19. Carus asserts that continued disposal in a single-generator monofill has proven to be the best method of disposal for Carus' waste. Pet. at 19.

In general, Carus alleges that the proposed adjusted standard would have little, if any, adverse impact upon the people of the State of Illinois. Pet. at 19. In fact, Carus suggests that the proposed adjusted standard would actually result in a positive impact upon the people of the State of Illinois by more optimally utilizing permitted disposal volume in a securely-designed facility. Pet. at 20.

The Agency asserts that, insofar as Carus requests an adjusted standard to continue its disposal activities, a groundwater impact assessment model should be required for Parcel 1. Resp. at 6. The Agency, however, does not take issue with Carus' assertions that little or no

environmental impact will result as a consequence of an adjusted standard. Resp. at 6; Joint Mot. at 1-2.

Consistency with Federal Law

Carus argues that the proposed adjusted standard is consistent with federal law. Pet. at 23. Carus alleges that the remaining sections of Parcel 1 already comply with applicable Illinois standards and that Illinois' landfill regulations are more stringent than applicable federal laws. Pet. at 23. Moreover, because it is not a municipal solid waste landfill, the Carus landfill is exempt from certain federally-mandated requirements. Pet. at 23. Finally, Carus asserts that there are no specific federal standards, restrictions or deadlines applicable to its landfill, and the Illinois regulations which are the subject of this petition do not implement any federal law or program applicable to this landfill. Pet. at 23.

The Agency agrees that the proposed adjusted standards are consistent with federal law. Resp. at 3.

DISCUSSION

The Board finds that Carus has demonstrated that an adjusted standard from 35 Ill. Adm. Code 814.Subpart D, the rule of general applicability, is appropriate in order for Carus to continue disposing of its waste. As is required by the Act, Carus has met the conditions necessary for grant of an adjusted standard. Carus has successfully established that its circumstances are significantly different than those circumstances considered by the Board upon adoption of the general standard and that those circumstances justify an adjusted standard. Further the sections of Parcel 1 for which an extension is being sought have an in-situ liner and leachate collection system that provide adequate protection against groundwater contamination. These factors suggest that allowing Carus to continue operation of Parcel 1, for a period of 18 months beyond the September 18, 1997 deadline, without performing a groundwater impact assessment, will not result in adverse environmental or health effects. The requested adjusted standard is also consistent with the applicable federal regulations. In addition, with the exception of the groundwater impact assessment issue, the Agency's response affirms that an adjusted standard is warranted.

Carus and the Agency agree that Carus should be granted an adjusted standard from Subpart D regulations for a period up to 18 months after September 18, 1997, so that Sections 3 and 4 of Parcel 1 may continue to accept waste until it meets its permitted limits. Joint Mot. at 1; Rep. at 1. However, as noted above, the parties disagree with respect to one issue pertaining to the performance of the groundwater impact assessment, which is required by 35 Ill. Adm. Code 814.302 for a Subpart C landfill. In this regard, the Board notes that since Carus seeks an 18-month extension of the closure deadline under Part 814.Subpart D, the petition must be evaluated in terms of the regulations that would apply to a landfill that remains open beyond the regulatory deadline, *i.e.* in terms of the Part 814.Subpart C regulations.

The additional requirements under Subpart C include a leachate drainage and collection system, a groundwater impact assessment, and compliance with the Part 811 groundwater quality standards at the edge of the zone of attenuation. Both Carus and the Agency agree that the portion of Parcel 1 for which the petitioner seeks an extension meets the Subpart C requirements for the leachate collection system. Thus, the performance of the groundwater impact assessment is the only remaining issue that must be resolved to satisfy Section 28.1(c)(3) of the Act, *i.e.*, to determine whether allowing Carus to continue waste disposal in certain sections of Parcel 1 for a period of 18 months beyond September 18, 1997, would result in environmental or health effects substantially or significantly more adverse than the effects considered by the Board in adopting the rule of general applicability.

Under Subpart C, a groundwater impact assessment must be performed in accordance with 35 Ill. Adm. Code 811 standards. The groundwater impact assessment involves the use of a groundwater contaminant transport model, site-specific hydrogeologic information, and the landfill design standards (liner, leachate collection system, final cover and leachate characteristics) to demonstrate that concentrations of all constituents of the leachate outside the zone of attenuation are less than the groundwater quality standards of 35 Ill. Adm. Code 811.320.⁵ If the assessment shows that the landfill design standards are inadequate to meet the applicable groundwater quality standards at the edge of the zone of attenuation, then additional protection must be provided. Such protection may consist of, among other things, using multiple liners, changing configuration to reduce infiltration, or prohibiting or limiting disposal of certain types of wastes. In drafting the Subpart C regulations, the Board intended the groundwater impact assessment to be performed prior to the placement of waste in a landfill unit. See In the Matter of: Development, Operation and Reporting Requirements for Non-Hazardous Waste Landfills (August 17, 1990), R88-7. In this regard, the Board noted that it would be inappropriate to assess the potential for contamination of landfill design after the landfill is placed into operation and contamination occurs. In the Matter of: Development, Operation and Reporting Requirements for Non-Hazardous Waste Landfills (August 17, 1990), R88-7, slip op. at Appendix A-1 at 65.

Under Subpart D, the performance of a groundwater impact assessment is not required since it was envisioned that Subpart D landfills, which are not required to be equipped with leachate collection systems, may not meet the Part 811 groundwater quality standards. As noted by Carus, the groundwater quality standards that apply to Subpart D landfills are the Board's public and food processing water supply standards under Part 302 and the standards apply at edge of the unit. In adopting the Part 814.Subpart D standards, the Board found that compliance with the Part 302 water quality standards would assure the protection of groundwater and at the same time encourage the closure of Subpart D landfills as soon as possible. The regulations also place other limitations on Subpart D landfills to minimize any adverse impacts. These limitations include prohibitions against expansion beyond permitted area and acceptance of new special wastes. However, in the case of Subpart C landfills, the

⁵ Section 814.320 requires the groundwater quality to be maintained at each constituent's background concentration at or beyond the zone of attenuation for a period of 100 years after the closure of the last unit accepting waste within a landfill facility.

regulations require leachate collection systems and groundwater impact assessments since these units may remain in operation for a much longer period. In addition, Subpart C landfills are not subject to any limitations pertaining to expansion and waste acceptance.

In the present case, Carus is not requesting an extension of the deadline in order to expand the remaining sections of Parcel 1 or to accept new waste stream. Carus is only seeking relief so that it can continue to dispose of its wastes in the remaining sections of Parcel 1 up to the permitted elevations. The information provided by Carus indicates that Parcel 1 is in compliance with applicable groundwater quality standards, *i.e.*, 35 Ill. Adm. Code 302 water quality standards. Further, the sections of Parcel 1 for which an extension is being sought have in-situ liner and a leachate collection system that provide adequate protection against groundwater contamination. These factors persuade the Board that allowing Carus to continue the operation of Parcel 1, for a period of 18 months beyond September 18, 1997, without performing a groundwater impact assessment will not result in adverse environmental or health effects.

For the reasons set forth above the Board finds that Carus has satisfied Section 28.1 of the Act. 415 ILCS 5/28.1 (1996). Therefore, the Board grants Carus an adjusted standard from 35 Ill. Adm. Code 814.Subpart D similar in language to that agreed upon by Carus and the Agency, absent the groundwater impact assessment requirement.⁶ The most significant modification is that the Board grants Carus an adjusted standard from Subpart D, rather than from both Subparts D and C. The order also requires Carus to comply with its SMP which embodies several of the conditions set forth in Subpart C.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

Petitioner, Carus Chemical Company, is hereby granted an adjusted standard from 35 Ill. Adm. Code 814.401(a). Carus Chemical Company may continue to accept waste for disposal in the remaining portions of Sections 3 and 4 of Parcel 1 of the Carus Disposal Area No. 2 in LaSalle County, Illinois, for a period up to 18 months after September 18, 1997, pursuant to the terms of its existing Significant Modification Permit issued in October 1993 (No. 1991-365-LFM) and 35 Ill. Adm. Code 814.Subpart D, subject to the following conditions:

1. No waste may be accepted on or after March 18, 1999;
2. After the adjusted period of operation, Carus Chemical Company must commence closure of the facility pursuant to the standards set forth in 35 Ill. Adm. Code 811 and its permit; and

⁶ The Board notes that because an adjusted standard is not a regulation, it will not give this adjusted standard a regulation number as requested by petitioner.

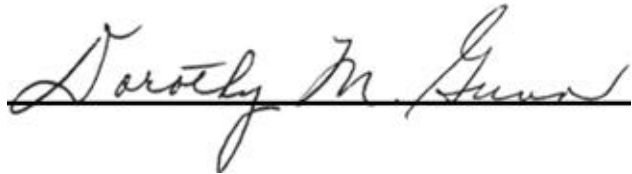
3. Within 90 days after issuance of this adjusted standard, Carus Chemical Company shall submit as a permit modification to the Agency for review and approval a revised postclosure plan and postclosure cost estimates, based on 35 Ill. Adm. Code 812.115, 812.116 and 814.402(b)(4), to account for the adjusted design period.

IT IS SO ORDERED.

Board Member J. Theodore Meyer dissented.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 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 18th day of September 1997, by a vote of 6-1.

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

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board