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STATE OF ILLINOIS
POLLUTION CONTROL BOARD
98-1

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PETITION OF)
CARUS CHEMICAL COMPANY, for)
ADJUSTED STANDARD from)
Ill. Adm. Code Part 814, Subpart D.)

AS _____
(Adjusted Standard-Land)

**NOTICE OF FILING
AND CERTIFICATE OF SERVICE**

TO: Mary Gade, Director
Illinois Environmental
Protection Agency
2200 Churchill Road
Springfield, IL 62716

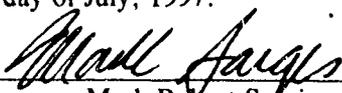
Division of Legal Counsel
Illinois Environmental
Protection Agency
2200 Churchill Road
Springfield, IL 62706

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Illinois Department of
Natural Resources
524 S. Second Street
Springfield, IL 62701-1787

PLEASE TAKE NOTICE THAT on 3rd day of July, 1997, we filed with the Clerk of the Pollution Control Board one original and nine copies of Carus Chemical Company's **Petition for Adjusted Standard and Appearance** in the above-entitled cause.

The undersigned hereby certifies that a true and correct copy of the above-described pleadings were filed with the Clerk of the Pollution Control Board via hand delivery and served upon the other above-identified parties at their above-listed addresses via first class U.S. Mail, by enclosing same in an envelope, properly addressed, with postage fully prepaid, and by depositing said envelope in a U.S. Post Office mail box on the 3rd day of July, 1997.



Mark Robert Sargis

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THIS FILING IS SUBMITTED ON RECYCLED PAPER

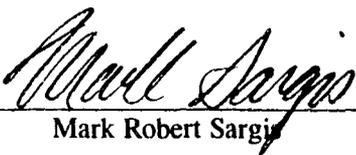
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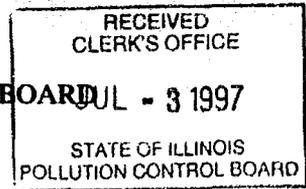
APPEARANCE

The undersigned hereby enters his appearance in this proceeding as counsel of record on behalf of Petitioner, Carus Chemical Company.



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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD JUL - 3 1997

IN THE MATTER OF:)
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PETITION OF)
)
CARUS CHEMICAL COMPANY,)
)
for ADJUSTED STANDARD from)
)
Ill. Adm. Code Part 814, Subpart D)

AS - 98-1

(Adjusted Standard-Land)

PETITION FOR ADJUSTED STANDARD

NOW COMES Petitioner, CARUS CHEMICAL COMPANY, a division of CARUS CORPORATION (collectively "Carus"), by its attorneys Mauck, Bellande & Cheely, and, pursuant to Section 28.1(a) of the Illinois Environmental Protection Act ("the Act"), 415 ILCS 5/28.1(a), and the Pollution Control Board regulations appearing at 35 Ill. Adm. Code 106, Subpart G, requests that the Illinois Pollution Control Board ("Board") enact an adjusted standard to modify a rule of general applicability which otherwise governs Carus Disposal Area No. 2 in LaSalle County, Illinois ("the Carus Landfill"). Specifically, Carus requests an adjustment to the standard appearing at 35 Ill. Adm. Code Part 814, Subpart D, to allow a certain portion of the Carus Landfill to remain open for a limited period of time beyond September 18, 1997 so that the facility can achieve its permitted final elevations and contours. In the alternative, Carus requests an adjustment to the standard appearing at 35 Ill. Adm. Code Part 814, Subpart C, to allow that portion of the Carus Landfill to be reclassified as a facility to remain open for an indefinite period of time beyond September 18, 1997.

In support of its Petition, and in accordance with 35 Ill. Adm. Code 106.705, Carus states as follows:

STANDARD TO BE ADDRESSED

(35 Ill. Adm. Code 106.705(a))

The standard from which Carus seeks an adjusted standard is set forth at 35 Ill. Adm. Code Part 814, Subpart D, Section 814.401(a) of the Board's waste disposal regulations: "...units that meet the requirements of this Subpart shall initiate closure between two and seven years after the effective date of this Part." The effective date of this regulation is September 18, 1990 (14 Ill. Reg. 15861).

Carus, for its adjusted standard, proposes that a new section be added to Part 814, Subpart D of the Board's regulations which would effectively recognize that the remaining portions of Parcel 1 of the Carus Landfill meet or exceed all of the technical standards under Subpart C,¹ and thereby allow these remaining portions of Parcel 1 to accept waste for up to 15 months after September 18, 1997, in order for these portions to reach final permitted elevations. In the alternative, Carus proposes that, based on the same demonstrated facts, a new section be added to Part 814, Subpart C of the Board's regulations which would allow these portions of Parcel 1 to remain open for an indefinite period of time beyond September 18, 1997.

IMPLEMENTATION OF REQUIREMENTS OF FEDERAL LAW

(35 Ill. Adm. Code 106.705(b))

The regulation of general applicability, 35 Ill. Adm. Code 814.401(a), as well as Part 814 and the non-hazardous solid waste regulations adopted in R88-7 generally, were not promulgated to implement, either in whole or in part, the requirements of the federal programs identified in 35 Ill. Adm. Code 106.705(b). Furthermore, the Illinois regulations were intended to be, and are,

¹ As discussed below, Carus has met all of the technical standards under Subpart C for the remaining portions of Parcel 1. The only Subpart C requirement not specifically satisfied for these portions is a groundwater impact model, which was performed for Parcel 2 but not specifically for Parcel 1.

more stringent than applicable federal law. In response to the adoption of federal regulations, 40 CFR Part 258, on October 9, 1991 (56 Fed Reg. 51016), the Illinois regulations were modified on December 16, 1993 (R93-10). Primarily, the provisions of 35 Ill. Adm. Code 814.402 (c) - (g) were added to implement requirements of federal law. However, because the Carus Landfill is not a municipal solid waste landfill, but rather a monofill for Carus's own process waste, these amendments do not apply to the facility.

LEVEL OF JUSTIFICATION REQUIRED FOR AN ADJUSTED STANDARD

(35 Ill. Adm. Code 106.705(c))

In adopting standards for existing landfills in Part 814 (R88-7), the Board did not specify a level of justification or any other requirements necessary for an adjusted standard. Pursuant to Section 28.1(c) of the Act, the Board may therefore grant the adjusted standard requested by Carus if the Board determines, upon adequate proof by Carus, that:

1. Factors relating to Carus are substantially and significantly different from the factors relied upon the Board in adopting the general regulations (R88-7) applicable to the Carus Landfill;
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 (R88-7); and
4. The adjusted standard is consistent with any applicable Federal Law.

See 415 ILCS 28.1(c) (1996). Carus's Petition contains the required proof.

DESCRIPTION OF THE NATURE OF PETITIONER'S ACTIVITY

(35 Ill. Adm. Code 106.705(d))

Carus owns and operates a chemical manufacturing facility in LaSalle County, Illinois. With over 120 employees, Carus is one of the largest employers in the City of LaSalle. The Carus plant produces specialty chemicals, primarily potassium permanganate, which is an oxidant

used to control taste, odor and color in the treatment of drinking water and wastewater, mostly by municipalities and municipal water systems. Carus is the sole producer of potassium permanganate in the Western Hemisphere, with most of its competition from foreign producers. It is Carus Chemical's general policy and practice to manufacture its products and operate its facilities to comply with or exceed applicable environmental rules and regulations. As evidence of its commitment to environmental policies and practices, Carus is a charter member of the Partners in Pollution Prevention Program established by the Illinois Environmental Protection Agency ("Agency"), and, since 1988, the company has been an active participant in Responsible Care[®].² (See Affidavit of David Covey, ¶¶ 5-7, attached hereto as Exhibit A and incorporated herein by reference.)

As a by-product of its manufacturing operations, Carus generates certain non-hazardous special wastes. In order to cost-effectively manage and dispose of its special waste, Carus owns and operates the Carus Landfill (also referred to herein as "the landfill facility" or "the facility") located in Ottawa Township, LaSalle County, Illinois. Although LaSalle County is not currently zoned, all of the surrounding property has been used for other landfill operations or for agricultural use. There are no residential homes within at least one-quarter mile of the waste boundary of the landfill. (An area location map showing the facility and the surrounding area is attached hereto as Exhibit B and incorporated herein by reference.) The Agency issued operating permit 1980-42-OP for the Carus Landfill in 1981. The facility is identified as Agency Site No. 0990800015. The Carus Landfill is permitted to accept certain designated non-hazardous special

² Responsible Care[®] is the Chemical Manufacturers Association (CMA) initiative to continually improve the chemical industry's responsible management of chemicals.

wastes. The only wastes disposed of at the facility, primarily manganese dioxide and manganese hydroxide residues, are generated by Carus at its LaSalle County manufacturing plant.

The Carus Landfill consists of two parcels, Parcel 1 and Parcel 2. Parcel 1 of the Carus Landfill was divided into four separate operational sections for effective management of landfill operations. Section 1 of Parcel 1 of the facility was closed by September 18, 1992 as a Subpart E facility. 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 Subpart D. 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, 1997.³ In August, 1995, Carus completed construction of Section 4 of Parcel 1, consisting of approximately 0.9 acres with a calculated design life of 2.0 years, and received Agency approval for waste acceptance beginning in October, 1995. (See Covey Affidavit, ¶ 11.) Carus will not have filled this final section of Parcel 1 to permitted limits by September 18, 1997. Parcel 2 is currently under construction but, due to unanticipated construction delays, will not be ready for waste acceptance by September 18, 1997. (See Johnsrud Affidavit, ¶ 16; Covey Affidavit, ¶ 19.) (A site diagram showing the parcels and sections of the Carus Landfill is attached hereto as Exhibit C and incorporated herein by reference.)

³ Some Carus waste that would have been disposed of in Sections 2 and 3 of Parcel 1 to complete fill in those sections was re-directed to Section 4 shortly after its construction and Agency approval in an attempt to place an initial 5-foot waste layer over the liner, in accordance with 35 Ill. Adm. Code 811.321(b). Due to the relatively small and constant rate of waste placement in the Carus Landfill compared to commercial solid or special waste landfills, it takes much longer for Carus to complete placement of this initial waste layer over the liner. In addition, because these sections are not completely separate cells, operational procedures for placement of Carus's waste involve partial filling of the next section (*e.g.*, Section 4) before completing fill at the prior section (*e.g.*, Section 3).

The R88-7 regulations, promulgated by the Board in 1990, imposed more stringent design and operating standards on both new and existing non-hazardous waste landfills. On March 12, 1991, Carus filed with the Agency Form LPC-PA15, pursuant to 35 Ill. Adm. Code 814.103, predicting that Carus would initiate closure of the remainder of Parcel 1 by September 18, 1997. (A copy of Form LPC-PA15 is attached hereto as Exhibit D and incorporated herein by reference.) At that time, Carus predicted that it would initiate closure of Parcel 1 in 1997 based on estimated annual volume of waste received and remaining capacity. (See Covey Affidavit, ¶10.) Carus estimated that it would receive 12,500 cubic yards of process waste per year and estimated remaining total capacity of 220,000 cubic yards. Of this total, 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. Based on this disposal rate and expected reductions in airspace to account for grading and placement of daily and intermediate cover, Carus's conservative estimates were reasonable to suggest that closure of the remaining sections of Parcel 1 would be initiated prior to September 18, 1997.⁴ (Covey Affidavit, ¶ 12.) Nevertheless, Parcel 1 currently has remaining capacity of more than one year, despite the fact that Carus has disposed of greater than 12,500 cubic yards of its process waste in every calendar year since the 1991 estimate. (Covey Affidavit, ¶ 15.) Carus believes that the reason for this unanticipated remaining capacity at Parcel 1 may be in part due to optimization of operational procedures, but mainly due

⁴ On the same Form LPC-PA15, Carus predicted that it would initiate closure of Section 1 by September 18, 1992, initiate closure of the remainder of Parcel 1 by September 18, 1997, and keep Parcel 2 open beyond September 18, 1997. Based on the earlier closure of Section 1, the upcoming anticipated closure of Sections 2, and the beginning of operations at Parcel 2 in late 1997 or early 1998, the only time estimate that proved incorrect was the completion of fill activities at the remaining sections (Sections 3 and 4) of Parcel 1.

to less stringent daily and intermediate cover requirements allowed for in Carus's Significant Modification Permit, issued subsequent to the March 1991 estimates. (See Covey Affidavit, ¶ 16.)

Carus applied for a Significant Modification Permit in November, 1991, for the remaining portions of Parcel 1 and for all of Parcel 2. The Agency issued a Significant Modification Permit (No. 1991-365-LFM) for remaining portions of the facility in October, 1993. To obtain this permit, Carus and its consultant, Andrews Environmental Engineering Inc. ("Andrews"), demonstrated compliance with the applicable standards set forth in 35 Ill. Adm. Code Part 814, which reference certain Part 811 standards for new facilities. Parcel 2 was designated a Subpart C facility, and all sections of Parcel 1 except Section 1 were designated Subpart D. Notwithstanding this earlier designation, the remaining portion of Section 3 and all of Section 4 were designed and constructed to the identical technical standards approved for Parcel 2. (See Affidavit of Bryan Johnsrud, ¶ 8 attached hereto as Exhibit E and incorporated herein by reference.) In effect, as more fully explained below, the design and construction of these remaining sections of Parcel 1 met or exceeded the requirements of Subpart C.

The Significant Modification Permit allows Carus to operate the existing landfill in compliance with the applicable requirements of 35 Ill. Adm. Code Parts 811 through 813, as modified by Part 814, Subpart C, which allows for operation subsequent to September 18, 1997. The Significant Modification Application, however, identifies that remaining sections of Parcel 1 will initiate closure by September 18, 1997. The permit does not specifically authorize Carus to accept waste in these sections for disposal or for use in closure or post-closure care.

NARRATIVE DESCRIPTION OF PROPOSED ADJUSTED STANDARD

(35 Ill. Adm. Code 106.705(f))

Since Parcel 1 of the Carus Landfill was identified in 1991 as an existing unit that would initiate closure within 7 years, it is referred to as a "Subpart D" facility, governed by 35 Ill. Adm. Code 814.401 and 814.402. Those provisions essentially require a Subpart D facility operator to plan waste deposits in such a manner that the last load necessary to fill the site to capacity will arrive on or shortly before September 18, 1997 so that the operator can commence closure on that date. Such optimal timing of waste disposal is not always possible, particularly when the operator is also the sole generator of waste residue from its production processes and often experiences fluctuations in the monthly and annual rates of waste generation, based on changing business conditions and production.

A similar situation involving timing for closure occurred in 1992, when operators of Subpart E commercial facilities were required, like Subpart D operators now, to "commence closure" by a date certain. In the case of Subpart E facilities, closure was to commence by September 18, 1992. In 1992, however, the Agency allowed many Illinois landfills to continue accepting waste as part of their approved closure plans so that permitted final elevations could be achieved by placement of this waste. The Agency based its decision on 35 Ill. Adm. Code 807.509, which allowed operators to continue accepting waste as part of a closure plan approved by the Agency, given that Subpart E facilities were then subject to Part 807. This decision by the Agency was both a practical and technically feasible solution to a problem that otherwise would have left many landfill site operators with permitted but unused air space.

Unfortunately, there is no parallel provision in the R88-7 regulations, and so the Agency does not now have the same regulatory authority that it had in 1992 to solve the same capacity and

timing problem that Carus faces today. However, the same rationale applies even more forcefully today, given that: (1) Carus's "Subpart D" facility, which meets or exceeds all of the Subpart C technical requirements, is much more environmentally secure than the Subpart E facilities which were granted relief in 1992 but which were not required to meet either the Subpart C or D requirements; and (2) Carus can only accept its own generated waste and cannot adjust gate receipts through landfill market conditions in order to maximize use of its landfill capacity and thereby regulate the rate of filling.

Carus therefore proposes an adjusted standard that allows its landfill facility to continue accepting waste for disposal in the remaining unfilled portions of Section 3 and Section 4 of Parcel 1 only, for a period of up to 15 months after September 18, 1997, all in accordance with the approved operating procedures approved in its Significant Modification permit. As will be discussed in more detail below, 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.⁵ After the 15-month extension period expires, Carus will be required to commence closure unless an Agency-issued permit provides that it may continue to accept waste for disposal or for use in closure and post-closure care. This second provision is analogous to 35 Ill Adm. Code 807.509, which allowed Subpart E facility operators to continue accepting waste as part of their closure plans approved by the Agency. Subject to Agency approval, Carus believes this allowance is

⁵ The initial portion of Section 3, constructed and in operation prior to issuance of the Significant Modification Permit, is nevertheless being retrofitted with an intermediate leachate collection system so that a leachate collection system will underlay all remaining waste disposed of in Parcel 1.

appropriate given that the physical characteristics of Carus's waste are not unlike earthen cover material. (See Covey Affidavit, ¶ 16.)

The following is the proposed language for the adjusted standard:⁶

Section 814.403 Adjusted Standard: Carus Chemical Company

- (a) *Notwithstanding Sections 814.401 or 814.402, for a period of up to 15 months after September 18, 1997, 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, pursuant to the terms of its existing operating permit, at which time it must commence closure pursuant to the standards set forth in Part 811 of these regulations.*
- (b) *After Carus initiates closure of Parcel 1 of Carus Disposal Area No. 2 in LaSalle County, Illinois, it may accept waste for disposal or for use in closure and post-closure care only as authorized in its closure and post-closure care plans.*

As a possible alternative to this proposed language, Carus suggests another proposal, 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). As described in more detail below, however, Andrews, performed this model for Parcel 2, and believes the results of the model, if performed for Parcel 1, would be comparable to results already generated for Parcel 2. Carus believes that performing the model again for the remaining portions of Parcel 1 would be unnecessary to demonstrate any greater compliance with the Subpart C requirements than already shown. Under this alternative approach, then, the remaining portions of Sections 3 and 4 of Parcel 1 should be redesignated as meeting Subpart C requirements, allowing these sections to remain open for an indefinite period of time beyond September 18,

⁶ Carus notes that another petitioner, Waste Professionals, Inc. d/b/a Pekin Landfill, is requesting a similar adjusted standard, and has also proposed new Section 814.403. Depending on whether the Board grants that or other, similar adjusted standards, the language for Carus's adjusted standard may be numbered sequentially, or incorporated as subsections of the same overall section for other adjusted standards under Part 814.

1997.⁷ As an alternative to the language above, therefore, Carus proposes the following the adjusted standard:

Section 814.303 Adjusted Standard: Carus Chemical Company

- (a) *In accordance with Section 814.302(a), 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, for an indefinite period of time beyond September 18, 1997, pursuant to the terms of its existing operating permit, notwithstanding the prior designation of these portions of Parcel 1 under Part 814, Subpart D, based on demonstrated compliance of these portions of Parcel 1 with the requirements of Subpart C, except that a groundwater impact assessment model pursuant to Sections 811.317 and 811.318(c), already demonstrated for Parcel 2, is not also required specifically for Parcel 1.*
- (b) *After Carus initiates closure of Parcel 1 of Carus Disposal Area No. 2 in LaSalle County, Illinois, it may accept waste for disposal or for use in closure and post-closure care only as authorized in its closure and post-closure care plans.*

By virtue of preparing its Significant Modification Application and its subsequent construction and operation of Sections 3 and 4 of Parcel 1, Carus already has expended the efforts necessary to achieve either proposed standard identified above. As discussed more fully below, Carus previously spent at least \$90,000 more than otherwise necessary under Subpart D to "overdesign" and construct the remaining sections of Parcel 1.

HOW PETITIONER SEEKS TO JUSTIFY THE PROPOSED ADJUSTED STANDARD
(35 Ill. Adm. Code 106.705(h))

The Illinois 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

⁷ Section 814.301(a) of the Board's regulations states that "units that meet the requirements of this Subpart [C] may remain open for an indefinite period of time beyond seven years after the effective date of this Part [September 18, 1990]." Notwithstanding Carus's prior designation of the remaining sections of Parcel 1 as "Subpart D" in the 1991 notification, and regardless of whether there is any provision or Agency policy to redesignate these landfill sections, it would appear that the Board's regulation effectively allow for a "redesignation" of a facility if it meets the necessary standards, as may be adjusted by the Board.

the effective date, *i.e.*, September 18, 1997. As stated earlier, 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 back in 1991. Although not required for a facility designated Subpart D, these remaining portions of Parcel 1 were designed and constructed and are being operated identically to the design, construction and operation plans for Parcel 2, which is already designated as a Subpart C facility. (See Covey Affidavit, ¶ 13.) In fact, based on the information submitted in the Significant Modification Application as well as on actual construction and operation, the remaining portion of Section 3 and all of Section 4 meet all of the technical requirements for Subpart C facilities. (See Covey Affidavit, ¶ 14.) In addition, as detailed below, these remaining portions of Parcel 1 as well as Parcel 2 satisfy several of the 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 system requirements.⁸

The following standards are those required by Subpart C that are not also required by Subpart D for non-municipal solid waste landfills: (1) the location standards of 35 Ill. Adm. Code 811.302(c); (2) the standard for a leachate collection and management system in 35 Ill. Adm. Code 814.302(b)(1); (3) the safety factor standard of 35 Ill. Adm. Code 814.302(b)(2); (4) the additional hydrogeologic site information required in 35 Ill. Adm. Code 814.302(a)(5); (5) the groundwater impact assessment requirements of 35 Ill. Adm. Code 811.317 and

⁸ At the time when the Agency issued Carus its Significant Modification Permit, all Subpart C and D facilities were exempt from these requirements (*see* 35 Ill. Adm. Code 814.302(a) and 814.402(a)) and, notwithstanding the 1993 regulatory amendments, Carus's non-municipal waste landfill is still exempt from these standards.

811.318(c); and (6) the groundwater quality standards of 35 Ill. Adm. Code 811.320(a)-(c). The remaining sections of Parcel 1 satisfy the substance of each of these requirements.

First, although a natural barrier of trees is already present between the waste boundary and all public roads, as referenced in the Significant Modification Application, no additional screening of operations is necessary because the remaining sections of Parcel 1 are located more than 500 feet from Township Road 317 (Koenig Road), thus satisfying the location standard of Section 811.302(c). (See Site Diagram, Exhibit C.) Second, the remaining portion of Section 3 and all of Section 4 already have, like Parcel 2 will have, a leachate collection and management system that meets the standards of Sections 811.307 and 811.308, which exceeds the requirements of Section 814.302(b)(1). The design for this leachate system, as detailed in the Significant Modification Application, therefore exceeds the Subpart C standard.⁹ (See Johnsrud Affidavit, ¶ 7.)

Third, although not even required for either Subpart C or D facilities, the remaining sections of Parcel 1 satisfy the foundation and mass stability analysis standards of Sections 811.304 and 811.305, as detailed in the Significant Modification Application. These standards exceed the applicable requirements of the safety factor required in Section 814.302(b)(2) of Subpart C. (See Johnsrud Affidavit, ¶ 7.)

Fourth, the information in the Significant Modification Application satisfied the hydrogeological site investigation standard of Section 811.315, even though Subpart D did not

⁹ The initially used portion of Section 3 will have an intermediate leachate collection system over existing waste, which meets or exceeds the Subpart C requirement that a facility be equipped with a system to effectively drain and collect leachate, and transport it to a leachate management system (35 Ill. Adm. Code 814.302 (b)(1)). (See Johnsrud Affidavit, ¶ 10.)

require it and Subpart C only required certain information necessary to satisfy other groundwater requirements. (See Johnsrud Affidavit, ¶ 7.)

Fifth, although a groundwater impact assessment was not specifically performed for Parcel 1, Carus has substantially complied with this standard. In its Significant Modification Application, Carus presented a groundwater impact assessment required by 35 Ill. Adm. Code 811.317 and 811.318(c) for adjacent Parcel 2, and believes it is unnecessary to also perform the assessment for the remaining sections of Parcel 1. Andrews expects that the results of a similar model if performed to focus on Sections 3 and 4 would be comparable to the results presented in the Application, based on the following: the close proximity of these sections to Parcel 2; the use of the same technical standards to design, construct and operate Section 3 and 4 and Parcel 2; Andrews's familiarity with the model parameters and input data, with the Carus Landfill and with the hydrogeology of the site and surrounding areas. (See Johnsrud Affidavit, ¶ 12.)

Sixth, information submitted in the Significant Modification Application demonstrated that Parcel 1 satisfied the groundwater standards applicable to Subpart D facilities (35 Ill. Adm. Code 814.402(b)(3)). These groundwater standards are based on compliance with the applicable Part 302 water quality standards at the waste boundary of Parcel 1. In contrast, the groundwater quality standards set forth in Section 811.320(a)-(c), applicable to Subpart C facilities, are based on background concentrations at or beyond a zone of attenuation, and on the groundwater impact assessment to determine standards within the zone of attenuation. The Subpart D standards under Section 814.402(b)(3), however, do not allow for a zone of attenuation, except by adjusted standard. The Subpart D groundwater quality standards are therefore generally more stringent than the standards of Section 811.320(a)-(c) applicable to Subpart C facilities, and Andrews

believes that Parcel 1 would meet the less stringent groundwater quality standards under Subpart C. (See Johnsrud Affidavit, ¶ 13.)

In addition to meeting or exceeding these Subpart C requirements, the bottom liner for the remaining portion of Section 3 and all of Section 4 of Parcel 1 exceeds the applicable requirements for either Subpart C or D facilities. These sections are lined with a compacted clay liner consisting of a 5-foot thick low permeability clay layer with a maximum permeability of between 2.6 to 8.5×10^{-8} cm/sec, as demonstrated by Andrews in the 1991 Application.¹⁰ This permeability exceeds the performance standard of 1×10^{-7} cm/sec applicable to new facilities under Part 811 and, more recently, to lateral expansions of municipal solid waste facilities. (See Johnsrud Affidavit, ¶ 9.)

In every respect except possibly one, therefore, the construction and operation of Section 4 as well as the remaining portion of Section 3 of Parcel 1 meets or exceeds all of the Illinois requirements for Subpart C facilities, even though these sections had been previously designated under Subpart D; only a groundwater impact assessment model specifically focused on Parcel 1 prevents its remaining sections from meeting all the requirements of Subpart C.

The other areas of Parcel 1 -- Sections 1 and 2 -- will have received their final volumes of wastes, and will be closed and covered, or in the process of receiving final cover by September 18, 1997, leaving only a small portion of air space remaining in Sections 3 and Section 4. (See Johnsrud Affidavit, ¶ 15.) Notwithstanding this small amount of air space, it will take Carus

¹⁰ By the time the Agency issued the Significant Modification Permit, the initial portion of Section 3 had already been constructed and begun operation under Carus's Part 807 permit. Under the old permit, the bottom liner of that initial portion of Section 3 (and the prior sections) consisted of a minimum of 10 feet in-situ clay. An intermediate leachate collection system is currently being installed on that portion of Section 3, above the waste already placed in that portion. This collection system, like the system installed in the remainder of Section 3 pursuant to the new permit, will drain and connect into the collection system for Section 4.

more than one year to fill this remaining air space, based on its current rate of waste generation and based on the cover procedures allowed in Carus's permit. (See Johnsrud Affidavit, ¶ 15; Covey Affidavit, ¶ 17.)

The inability of Carus to have Sections 3 and 4 filled to capacity prior to the regulatory deadline for Subpart D facilities is the result of its inability to control the rate of waste placement, which is based primarily on Carus's chemical production operations. Even though Carus had correctly predicted the dates for phased closure at the other portion of its landfill site, the only other way that Carus could now fill Sections 3 and 4 to permitted limits without this adjusted standard was to have already designated these sections as a Subpart C facility back in 1991, along with all of Parcel 2. The fact that the remaining sections of Parcel 1 actually meet, in substance, the requirements of Subpart C (see Ill. Adm. Code 814.301(a)) should control over the prediction Carus made back in 1991 regarding the estimated time for closure of these sections.

On Table A, set forth below, Carus has attempted to estimate the current remaining capacity for Sections 3 and 4 of Parcel 1, based on current survey information, calculations provided by Andrews, and Carus's current waste generation rates. As Carus has experienced in the past, however, it is particularly difficult to accurately estimate the timing to complete fill activities at this sole-generator, non-commercial landfill because Carus's rate of waste generation is based on production rates, which fluctuate continuously based on market conditions. Furthermore, it may be necessary for Carus to begin placement of substantial amounts of waste at newly constructed Parcel 2, during 1998, before completing fill operations at Parcel 1, so that an initially required layer of waste is placed on the bottom liner based on weather conditions, pursuant to 35 Ill. Adm. Code 811.321(b). (See footnote 3 above; Johnsrud Affidavit, ¶ 17.) It is therefore likely that Carus will need to overlap filling operations at Parcel 2 and at the remaining

portions of Parcel 1 in order to optimize waste disposal capacity. Consequently, the rate of disposal at Parcel 1 is expected to drop significantly after March, 1998.

TABLE A

		<u>Monthly Receipts</u>	<u>Remaining Air Space</u>
1997:	January (actual)	(2,286)	30,893
	February	(1,909)	28,984
	March	(2,301)	26,683
	April	(2,244)	24,439
	May	(2,487)	20,152
	June (estimated)	(1,800) ¹¹	20,152
	July	(1,800)	18,352
	August	(1,800)	16,552
	September	(1,800)	14,752
	October	(1,800)	12,952
	November	(1,800)	11,152
	December	(1,800)	9,352
1998:	January	(1,800)	7,552
	February	(1,800)	5,752
	March	(1,800)	3,952
	April	(500) ¹²	3,452
	May	(500)	2,952
	June	(500)	2,452
	July	(500)	1,952
	August	(500)	1,452
	September	(500)	952
	October	(500)	452
	November	(452)	0

Based on the foregoing information, Carus requests that the Board promulgate an adjusted standard that takes into account the unique circumstances at the Carus Landfill facility, including the fact that:

¹¹ This estimate is an average; monthly disposal rates are typically higher from April through September, and drop during winter months.

¹² As soon as Parcel 2 is operating, Carus will need to accelerate disposal in that section to satisfy initial cover requirements for the bottom liner.

1. In requiring Subpart D landfills to commence closure by September 18, 1997, neither the Board nor Carus contemplated the effect that requirement would have on non-commercial, non-municipal waste landfills, and neither contemplated that Sections 3 and 4 of Parcel 1, which already met or exceeded Subpart C construction and operation standards, would have remaining capacity available for use for more than a year beyond September 18, 1997.
2. Current groundwater monitoring activities do not show any concentrations of contaminants that would be attributable to the Carus Landfill. Carus believes that improved environmental safety at the facility is demonstrated by enhanced design features and improved operational practices over the years, culminating with the design of the remaining portion of Section 3 and all of Section 4, which include a state-of-the-art compacted clay liner and a leachate collection system. Placement of the small amount of remaining waste in Sections 3 and 4 is not expected to allow contaminants to impact groundwater.
3. Allowing optimum use of the permitted landfill so that Sections 3 and 4 can be filled to the permitted elevations will have a negligible impact on the environment. Thus, adjusting the landfill standards as requested herein will not result in environmental or health effects substantially and significantly more adverse than would occur if the generally applicable standards were implemented, *i.e.*, if Carus were to initiate closure at Sections 3 and 4 on September 18, 1997, and stop further placement of waste at Parcel 1.

IMPACT ON THE ENVIRONMENT

(35 Ill Adm. Code 106.705(g))

If Carus were to comply with the regulation of general applicability, there would be no appreciable enhancement to the environment than if Carus were to comply only with either of the proposed adjusted standards. Either of the proposed adjusted standards would have little, if any, qualitative or quantitative impact on human health, safety or the environment, inasmuch as they call only for a continuation of activities already permitted and conducted for the Carus facility, and to be conducted for several more years. Specifically, either adjusted standard would allow for disposal of a relatively small amount of homogeneous wastes in a monofill with a compacted clay liner and leachate drainage and collection systems, which is more environmentally sound than disposal in Subpart D facilities and even in some Subpart C facilities that lack such systems.

Furthermore, the remaining portions of Section 3 and 4 of Parcel 1 are technically equivalent to the design of Parcel 2, for which Carus already has obtained a Significant Modification Permit as a Subpart C facility.

At the same time, adoption of an adjusted standard instead of mandating compliance with the rule of general applicability would result in several environmental benefits. First, Carus's continued use of its permitted capacity would preserve capacity remaining at other, commercial landfills in which Carus's waste would otherwise be disposed, particularly since Parcel 2 will not be ready for waste placement until after September 18, 1997.¹³ Second, special waste permits and procedures are necessary for proper handling of Carus's waste streams. Many landfills may not be able to obtain the necessary authorizations. Finally, there is a significant environmental benefit for Carus to continue disposing of its waste in its current monofill, as opposed to a commercial landfill that may accept a variety of special wastes and municipal solid wastes. For its production size, Carus generates a substantial amount of special waste, anywhere between 12,000 to 22,000 cubic yards per year. Carus and its contractors employ specific waste handling practices to insure that its waste is properly and safely handled. Continued disposal in a single-generator monofill has proven to be the best method of disposal for Carus's waste.¹⁴

Overall, the proposed adjusted standard would have little, if any, adverse impact upon the people of the State of Illinois. The new standard may result in some increased costs of regulatory oversight by the Agency, but this "increased cost" would be a mere continuation of costs already

¹³ Even if Parcel 2 were ready by September 18, 1997, optimal use of air space at Section 4 of Parcel 1 will appropriately defer costs to Carus and to the State of preparing and reviewing future permit applications for landfill disposal of Carus waste prior to filling at Parcel 2.

¹⁴ In addition to these environmental benefits, there have been significant economic benefits to Carus by disposing of waste at its own site, as detailed below.

borne by the State of Illinois under preexisting conditions. Furthermore, if Carus had to prematurely close Sections 3 and 4, Carus may need to request a permit modification to approve revised final contours of Parcel 1, assuming Carus did not use earthen material to fill those sections to final permitted elevations. Such an application would require additional costs of review by the Agency. No other state agency would be affected by the adjusted standard, directly or indirectly.

Overall, from an environmental perspective, either of the proposed adjusted standards 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.

**EFFORTS NECESSARY TO COMPLY WITH
REGULATION OF GENERAL APPLICABILITY**

(35 Ill. Adm. Code 106.705(e))

As discussed above, only a groundwater impact assessment specifically focused on Sections 3 and 4, at most, prevents those sections of Parcel 1 from satisfying all Subpart C standards. The cost to perform a groundwater impact assessment for these 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. (See Johnsrud Affidavit, ¶ 14; Covey Affidavit, ¶ 19.) As more fully set forth above, the additional cost necessary to demonstrate such compliance is not justified, since the only sections to remain open beyond September 18, 1997 for the acceptance of waste are effectively designed and constructed to meet or exceed applicable "Subpart C" technical standards, complete with a compacted clay liner and a leachate collection system. Furthermore, Carus already has spent in excess of \$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 expenses do not include

the cost attributable to Parcel 1 for preparing and submitting the Significant Modification Application. (Johnsrud Affidavit, ¶ 11.)

The only other option available to Carus 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 that will remain by mid-September 1997. (See Table A.) The cost of providing earthen materials to fill this space is estimated to be \$2 per cubic yard. (Covey Affidavit, ¶ 20.) Consequently, after spending approximately \$90,000 more than necessary to design and construct Sections 3 and 4 of Parcel 1 to meet or exceed nearly all of the Subpart C standards, Carus 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.

In addition, because of unanticipated construction delays, Parcel 2 will not be available for acceptance of waste until at least late November 1997 at the earliest, and possibly not until early Spring 1998. (See Johnsrud Affidavit, ¶ 16; Covey Affidavit, ¶ 18.) Early closure of Parcel 1 consequently would also force Carus to transport its special waste longer distances, to commercial landfills, at greater cost to Carus and, ultimately, to its customers. The cost to Carus of disposing of its waste at commercial landfills from September 18, 1997, until Parcel 2 is approved for waste acceptance would create an unnecessary financial burden on Carus, as well as increased risk of potential liability to Carus for environmental problems at those other sites.¹⁵ Carus estimates the

¹⁵ Disposal of its waste at its own facility has helped to minimize environmental risks attributable to Carus. (See Covey Affidavit, ¶ 9.) Carus's first monofill, near its current facility, was operated by Wilmer Brockman and known as Brockman #2 (Carus Disposal Area No. 1). Mr. Brockman also operated a separate commercial landfill (Brockman #1) to dispose of municipal solid waste and a variety of other special wastes. To minimize future environmental risks and liabilities, Carus chose to develop and operate (through Brockman) its separate monofill rather than using Brockman's other landfill. Currently, Brockman #1 is the subject of litigation by the State due to
(footnote continued on next page)

additional disposal cost of its special waste (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. Carus's current incremental disposal costs are approximately \$7.50 per cubic yard, or \$13,500 per month.¹⁶ Carus would therefore incur additional costs of between approximately \$22,500 to \$31,500 per month without the relief granted by the adjusted standard. Pending further construction delays or adverse weather 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).

The total additional cost to Carus to comply with the regulation of general applicability would therefore range anywhere from at least \$76,000 to more than \$220,000. This additional cost would be particularly onerous, given that Carus already spent at least \$90,000 more on design and construction costs for Sections 3 and 4 of Parcel 1 than would have been required under Subpart D. (See Johnsrud Affidavit, ¶ 11.) The option of "premature" closure is therefore not only an inadvisable use of its own secure landfill space and of commercial landfill space, but also an unwise expenditure of money.

alleged environmental contamination, while Carus's disposal cell at Brockman #2 thus far has remained secure from causing any known environmental harm.

¹⁶ These amounts essentially include costs for operation and transport of waste. Carus already has incurred the construction costs for Sections 3 and 4 of Parcel 1, and will incur the same costs for closure, post-closure and other contingencies, whether or not these sections remain open past September 18, 1997.

CONSISTENCY OF ADJUSTED STANDARD WITH FEDERAL LAW

(35 Ill. Adm. Code 106.705(i))

The proposed adjusted standard is consistent with federal law. Carus has demonstrated compliance with applicable Illinois standards for the remaining sections of Parcel 1 and for Parcel 2. The Illinois landfill regulations remain more stringent than federal law as applied to Carus's facility and the characteristics of its special waste. Furthermore, because it is not a municipal solid waste landfill, the Carus Landfill is exempt from certain federally-mandated requirements. Finally, there are no specific federal standards, restrictions or deadlines applicable to this facility and the standard which is the subject of this petition does not implement any federal law or program applicable to the facility. The Board may therefore grant the adjusted standard consistent with federal law.

WAIVER OF HEARING

(35 Ill. Adm. Code 106.705 (j))

Carus hereby waives its right to a public hearing.

WHEREFORE, for the reasons set forth above, Carus Corporation respectfully requests that the Board enact the adjusted standard requested herein.

Respectfully submitted,

CARUS CHEMICAL COMPANY,
a division of CARUS CORPORATION

By: Mark Robert Sargis
One of its attorneys

Mark Robert Sargis
MAUCK, BELLANDE & CHEELY
19 South LaSalle Street
Suite 1203
Chicago, Illinois 60603
(312) 853-8713

M:\Landfill\Pet-adst

STATE OF ILLINOIS)
) SS:
COUNTY OF LASALLE)

AFFIDAVIT OF DAVID COVEY

DAVID COVEY, being first duly sworn, on oath deposes and states as follows:

1. That he is an adult residing in LaSalle County, Illinois, and is fully competent to testify to the facts contained herein, and would so testify if called upon to testify under oath at a hearing on this matter.

2. That he is employed by Carus Chemical Company, a division of Carus Corporation (collectively, "Carus"), as Manufacturing Service Manager. He is also one of the certified landfill operators of Carus's landfill, known as Carus Disposal Area No. 2 ("Carus Landfill"), located in Ottawa Township, LaSalle County, Illinois.

3. That this affidavit is being submitted in support of a Petition for Adjusted Standard filed by Carus, which petition was prepared, in part, by your affiant.

4. That he has been employed by Carus since April, 1991.

5. That he knows that it is Carus's general policy and practice to manufacture its products and operate its facilities to meet or exceed compliance with applicable environmental rules and regulations.

6. That he knows that Carus is a charter member of the Partners in Pollution Prevention Program established by the Illinois Environmental Protection Agency ("Agency").

7. That he knows that Carus has been an active participant in Responsible Care[®], an initiative of the Chemical Manufacturers Association to continually improve the industry's responsible management of chemicals.

EXHIBIT

A

8. That by virtue of his position as Manufacturing Services Manager, he is familiar with the facts and circumstances concerning the need for an adjusted standard to allow a small portion of the Carus Landfill to remain open for a limited period of time beyond September 18, 1997 for the purpose of achieving its permitted final elevations and contours, by placement of Carus's process waste, such placement to be restricted to separate operational portions of the Carus Landfill known and described in the permit documents as remaining Sections 3 and Section 4 of Parcel 1.

9. That he is aware of Carus's initial decision to dispose of its process waste in separate monofills, beginning with the operation of Carus Disposal Area No. 1 in 1976, to simplify and insure correct handling and disposal procedures for Carus's special waste, to minimize the company's risk of liability from disposing of its waste at commercially available landfills that accepted other types of municipal and/or industrial waste, and thereby to reduce Carus's long-term disposal costs.

10. That he is familiar with Form LPC-PA15 that Carus submitted in March, 1991, in which Carus attempted to estimate permitted landfill capacity, estimate annual volume of waste receipts, and project dates for initiation of closure for various sections of the Carus Landfill.

11. That he knows that, at the time that construction of the final section (Section 4) of Parcel 1 of the Carus Landfill was completed in August, 1995, the projected design life for Section 4 was only 2.0 years.

12. That from March, 1991, until at least August, 1995, based on the projections in Form LPC-PA15, Carus's actual disposal rates, and subsequently updated estimates and projections by Carus's technical consultant, Andrews Environmental Engineering, Inc. ("Andrews"), Carus

believed that it would initiate closure at Section 4 of Parcel 1 of the Carus Landfill by September 18, 1997.

13. That he is familiar with Carus's decision to design, construct and operate the remaining portion of Section 3 and Section 4 of Parcel 1, along with all of Parcel 2, to meet the latest engineering standards, even though some of those standards were not even applicable to either parcel under Federal or State law; and that he knows Carus's decision was based on its desire to satisfy the most current promulgated Illinois regulations and on its concern for environmental safety.

14. That he believes that the design and construction of the remaining portion of Section 3 and Section 4 of Parcel 1, designed identical to Parcel 2, satisfies substantially all of the technical and engineering standards required for Subpart C facilities, pursuant to 35 Ill. Adm. Code 814.301 and 814.302.

15. That he knows that Carus's actual rate of waste generation and disposal at Parcel 1 has exceeded 12,500 cubic yards each year since the estimates given in March 1991.

16. That he believes that one of the most significant factors resulting in a much greater amount of remaining capacity in Section 4 of Parcel 1 than originally anticipated, other than margin of error in calculations and implementation of more optimal operational procedures, is the Agency's decision, in issuing Carus's Significant Modification Permit, to allow Carus to deposit daily and intermediate cover on a much less frequent basis (*i.e.*, at least every 14 days) than would otherwise be required by State regulation, based on the nature, composition and physical characteristics of Carus's special waste, which is inorganic and not subject to the same litter, odor or vector problems as municipal solid waste or other types of special waste.

17. That he is familiar with the revised estimates of remaining capacity for Sections 3 and 4 of Parcel 1, and believes the remaining capacity to be between 12 to 15 months, based on the remaining airspace recently calculated by Andrews and based on Carus's current rate of waste generation.

18. That he is familiar with the status of the construction of Parcel 2 of the Carus Landfill and knows that its construction has been delayed due to unanticipated field conditions encountered during recent excavation activities, that construction will not be completed until at least late August, and that, pending operating approval by the Agency, Parcel 2 will therefore not be available for disposal of Carus's waste until late November, 1997 at the earliest or early Spring 1998 at the latest.

19. That, although remaining Section 3 and Section 4 of Parcel 1 satisfy substantially all of the Subpart C standards, he knows the cost to have our engineers demonstrate compliance with the only possible remaining standard otherwise applicable to Subpart C facilities would far exceed \$35,000.

20. That he knows that the unit cost of providing earthen materials to fill in remaining space prematurely at Parcel 1 is approximately \$2 per cubic yard, based on the per unit cost for the final protective layer estimated in the Closure and Post-Closure Plans and Cost Estimates section of the Significant Modification Application.

21. That he is familiar with all other material factual statements appearing in the attached Petition for Adjusted Standard, and knows those facts to be true.

FURTHER AFFIANT SAYETH NOT.

David Covey

David Covey

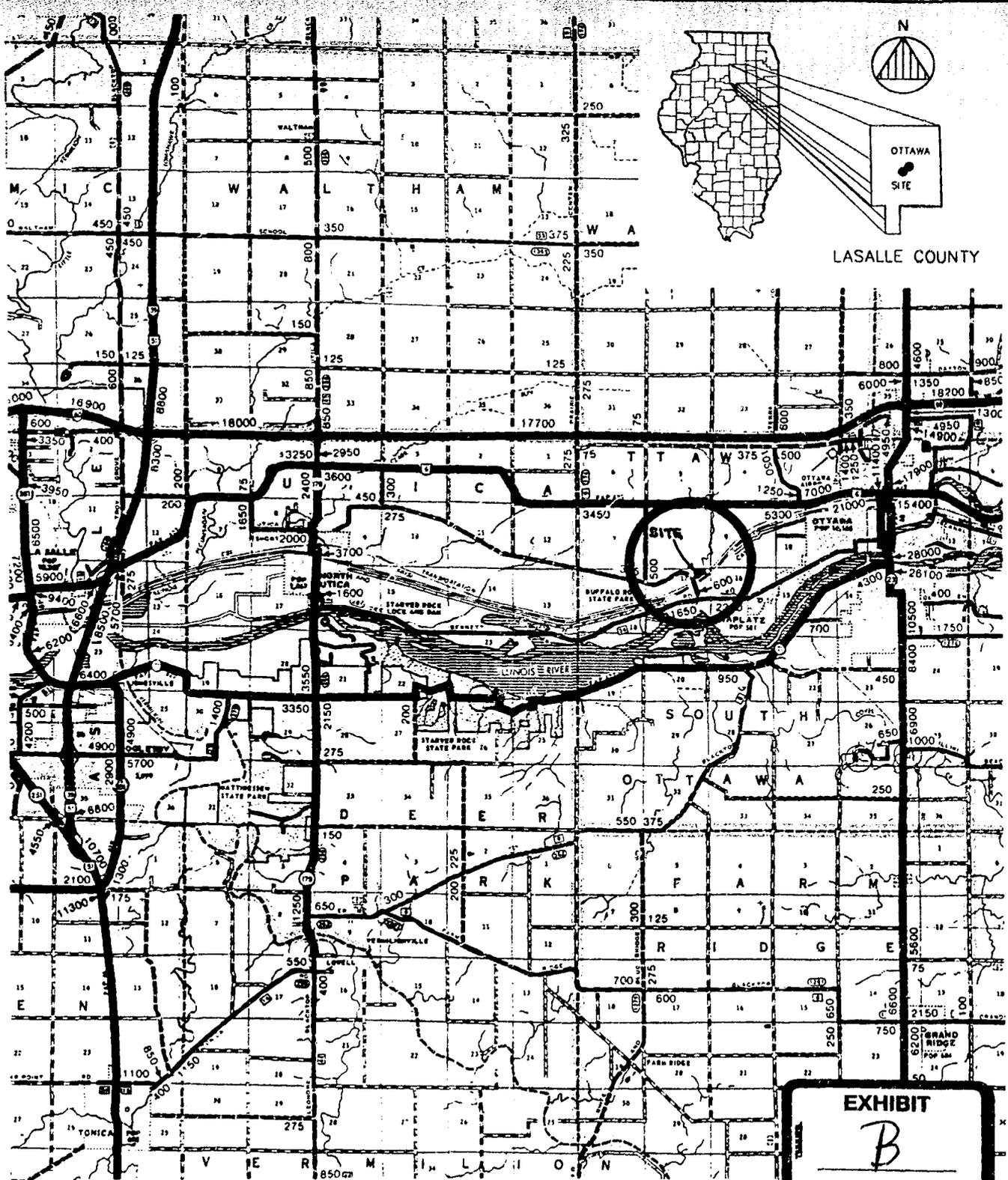
Subscribed and sworn to before me
this 24th day of June, 1997.



Kathleen J. Rizzo

Notary Public

M:Carus\Landfill\Aff-DCov



LASALLE COUNTY

SITE

EXHIBIT
B

APPROXIMATE SCALE
1 INCH = 2 MILES

NOTE:
THE BASE MAP IS TAKEN FROM A PORTION OF THE ILLINOIS DEPARTMENT
OF TRANSPORTATION 1989 TRAFFIC MAP FOR LASALLE COUNTY.



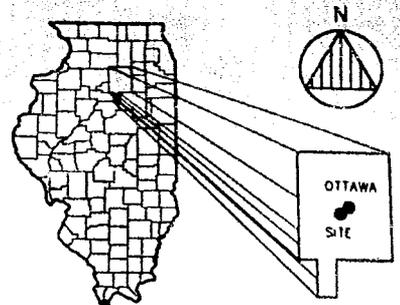
ANDREWS ENVIRONMENTAL ENGINEERING INC.
3535 MAYFLOWER BOULEVARD
SPRINGFIELD, ILLINOIS 62707-9401
TEL (217)787-2334 FAX (217)787-9495

CARUS DISPOSAL AREA NO. 2 - SITE LOCATION MAP

DRAWN BY: DJM	DATE: JUN 1997	SHEET NUMBER
DESIGNED BY: KLL	PROJECT: 75-105A	SITE
APPROVED BY: BCJ	FILE: \DWG\SITELOC	

NOTE:
 THE BASE MAP IS TAKEN FROM PORTIONS OF THE PERMITTED PHASING
 AND SITE DEVELOPMENT PLAN DRAWINGS (75-105A-SU & 75-105A-SC).

APPROXIMATE SCALE
 1 INCH = 200 FEET



LASALLE COUNTY

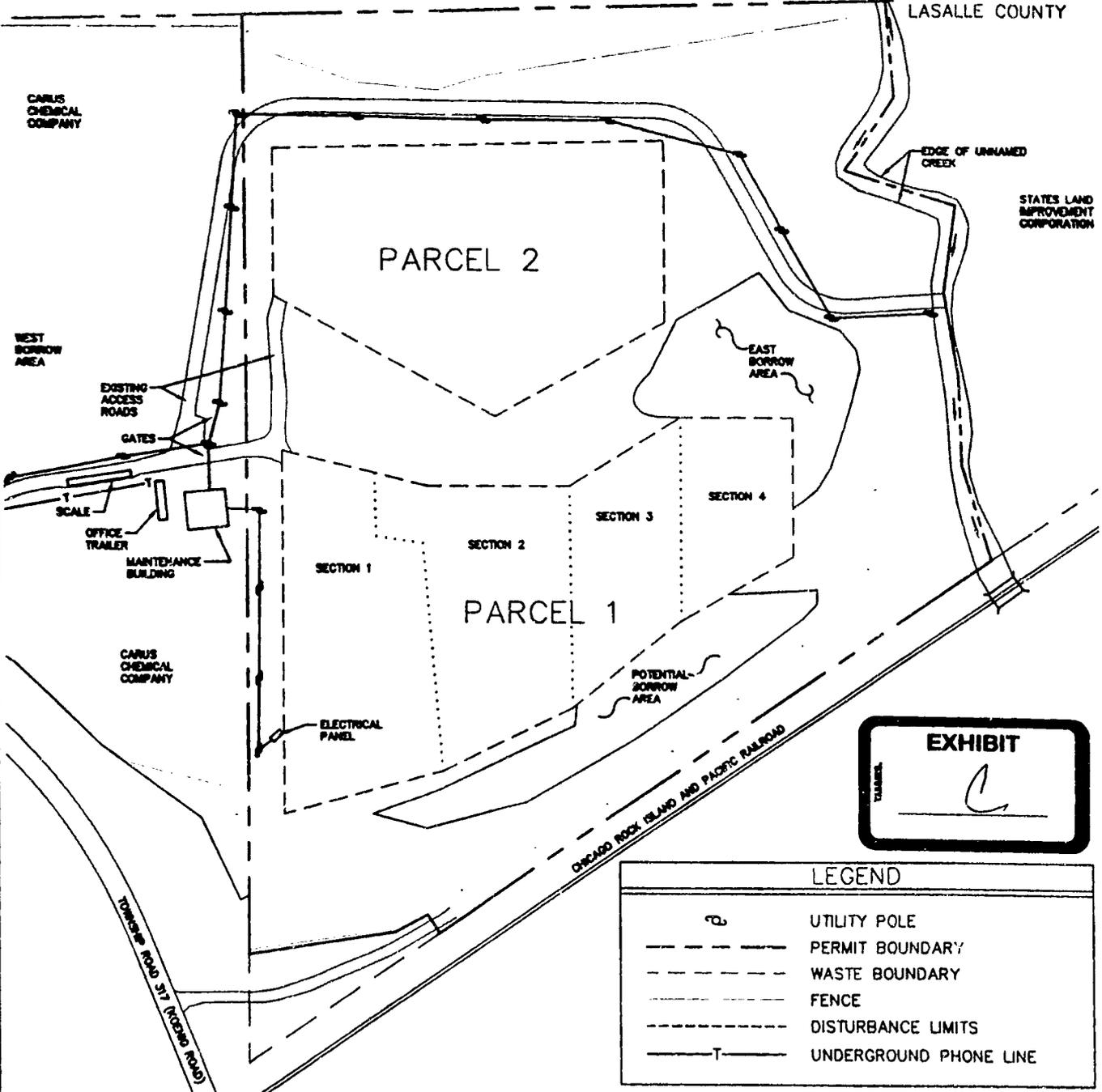


EXHIBIT
 TANKER
 C

LEGEND	
	UTILITY POLE
	PERMIT BOUNDARY
	WASTE BOUNDARY
	FENCE
	DISTURBANCE LIMITS
	UNDERGROUND PHONE LINE

75-105A



ANDREWS ENVIRONMENTAL ENGINEERING INC. 3535 Mayflower Blvd., Springfield, Illinois 62707/(217) 787-2334

March 11, 1991

Illinois Environmental Protection Agency
Division of Land Pollution Control - #24
Planning and Reporting Section
Compliance Unit
Post Office Box 19276
Springfield, Illinois 62794-9276

re: 0990800015 — LaSalle County
Ottawa/Carus Disposal Area #2

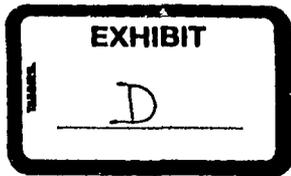
Dear Correspondent:

Enclosed is completed Form LPC-PA15 for the subject facility. Please let us know if you have any questions or need anything further.

Sincerely yours,

J. Douglas Andrews, P.E.,
President

JDA:rdk
enclosure
cc: Walter Moshage



Notice Form For Existing Landfills Required to Notify by March 18, 1991
LPC-PA15

This form must be completed and returned to the IEPA, Division of Land Pollution Control Permit Section to comply with the requirements of 35 IAC 814.103. This requirement applies to all Non-Hazardous landfills (Note: landfills includes waste piles, but not impoundments), both permitted and not permitted, which were not certified closed by the Agency by September 18, 1990. It establishes the minimum information necessary for the Agency to classify your facility and establish the applicability of 35 IAC Parts 811-815 of the Landfill regulations which became effective on September 18, 1990. **FORMS MUST BE SUBMITTED NO LATER THAN MARCH 18, 1991.**

Complete this form for the applicable facility or unit. Attach any additional information or plans as needed. Please contact the Solid Waste Unit, Permit Section at 217/782-6762 if you have any questions regarding completing this form.

Information in this document will be used in conjunction with reviews of future applications and reports. Therefore you may be required to explain or document this information at sometime in the future which could be years from now. The filing of this form is in no way to be considered approval of the information contained therein by the Agency.

SITE IDENTIFICATION

Name: Carus Disposal Area #2 Site # (IEPA): 0 9 9 0 8 0 0 0 1 5

Address: Koenig Road

City: Ottawa County: La Salle

If applicable, Original Development Permit

Permit No. 1980-42-DE Date: December 8, 1980

List all other Development Permits for any expansions

Supplemental Permit #1987-0980SP July 17, 1987

I. A. Landfills required to have a permit as of September 18, 1990. Use Part B if exempt under Section 21(d) of the Act.

- | | |
|--|---------------------------------|
| 1) Total number of acres permitted for development | <u>20</u> Acres |
| 2) Number of acres filled which have final cover/vegetation in place on September 18, 1990 | <u>0</u> Acres |
| 3) Active area where waste has been placed and cover has not been completed | <u>5.2</u> Acres |
| 4) Permitted capacity remaining | <u>220,000</u> cubic yards |
| 5) Estimated annual volume of waste received | <u>12,500</u> cubic yards |
| 6) Have any areas been filled beyond the currently permitted boundaries (include vertical or final contour boundaries as well as lateral boundaries) | <u> </u> Yes <u> X </u> No |

Attach a drawing (or drawings) showing the areas identified above in Nos. 1-4, and existing contours. Show permitted boundaries. Identify all units and types of waste received in each unit (i.e., inert, chemical, putrescible etc.).

B. For landfills not required to be permitted (Exempted under Section 21(d) of the Act; on-site)

- | | |
|---|-------------------------|
| 1) Number of acres filled which have final cover in place on September 18, 1990 | <u> </u> Acres |
| 2) Number of acres filled without final cover | <u> </u> Acres |
| 3) Active area where waste has been placed and final cover has not been completed | <u> </u> Acres |
| 4) Capacity remaining | <u> </u> cubic yards |
| 5) Estimated volume of waste disposed of annually | <u> </u> cubic yards |

Attach a drawing (or drawings) showing the areas identified above in Nos. 1-3. Show permitted boundaries. Identify all units and types of waste received in each unit (i.e., inert, chemical, putrescible etc.).

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Permit Management Center.

II. Provide the anticipated date the landfill will initiate closure. Month Dec Year 2009. Also, discuss how this information was derived. Include remaining capacity in cubic yards, rate of waste receipt, schedule for closure activities and revised final contours, if closing prematurely.

The Landfill has approximately 18 years permitted capacity remaining.

The rate of waste receipt should be reasonably constant over the site life.

III. Based on the above check the appropriate subpart which applies to the facility and demonstrate how compliance will be achieved.

Subpart E - Initiate Closure by September 18, 1992. Section 1 Only *

Subpart D - Initiate Closure by September 18, 1997. Parcel 1 Only*

Subpart C - Remain open beyond September 18, 1997. Parcel 2 Only*

Subpart B - Inert Waste Only - (for inert waste, documentation in accordance with 35 IAC 811.202 must be included)

Provide estimated filing date of the significant modification submittal required by 35 IAC 814.104 for Subpart D or C facilities Month JUNE; Year 1991.

Provide the name and phone of a contact person should any clarification be required.

Douglas Andrews, P.E.

(217) 787-2334

35 IAC 814.104(c) allows up to 48 months for the modification to be filed. Under 35 IAC 813.201(b) the Agency may require submission at an earlier date.

Mail an original and 2 copies to:

Illinois EPA
Division of Land Pollution Control #24
Planning and Reporting Section - Compliance Unit
P.O. Box 19276
Springfield, Illinois 62794-9276

I certify under penalty of law that the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly making false material statements or representations.

Signature

Roger C. Threde
(Operator/Authorized Agent)

Name/Title Roger C. Threde, V. President of Manufacturing

EB:rmi/3443n/90-91

* See attached Drawing

SCHEDULE FOR CLOSURE MAY CHANGE IN RESPONSE TO ANY CHANGE IN STATUTORY OR REGULATORY REQUIREMENTS.

STATE OF ILLINOIS)
) SS:
COUNTY OF LASALLE)

AFFIDAVIT OF BRYAN JOHNSRUD, P.E.

BRYAN JOHNSRUD, P.E., being first duly sworn, on oath deposes and states as follows:

1. That he is an adult residing in Sangamon County, Illinois, and is fully competent to testify to the facts contained herein, and would so testify if called upon to testify under oath at a hearing on this matter.
2. That he has been employed by the consulting firm of Andrews Environmental Engineering Inc. ("Andrews") as a Project Engineer since February, 1991.
3. That, as a Project Engineer for Andrews, he has performed work for Carus Chemical Company, a division of Carus Corporation (collectively "Carus") relating to Carus Disposal Area No. 2 ("the Carus Landfill") since February, 1991.
4. That this affidavit is being submitted in support of a Petition for Adjusted Standard filed by Carus.
5. That he is familiar with Form LPC-PA15 that Carus submitted in March, 1991, in which Carus attempted to project dates for initiation of closure for various sections of the Carus Landfill, based in part on estimates of permitted landfill capacity prepared by Andrews.
6. That he prepared the Significant Modification Application for the Carus Landfill, which Andrews submitted to the Illinois Environmental Protection Agency ("Agency") in November, 1991.

EXHIBIT
 E

7. That he knows that the design set forth in the Significant Modification Application satisfied Part 811 standards for foundation and mass stability analysis, liner and leachate collection and drainage, and hydrogeological site investigations, which standards exceeded the requirements of Part 814, Subpart C as well as Subpart D at the time of the Significant Modification Application, and which still exceed Subpart C requirements for facilities which do not accept municipal solid waste.

8. That he knows that, at the time the Agency issued the Significant Modification Permit in 1993, a portion of Section 3 and all of Section 4 of Parcel 1 had not yet been constructed, and that these portions subsequently were constructed to identical technical standards, as approved in the Permit, which met or exceeded the standards established for Subpart C facilities, set forth in 35 Ill. Adm. Code 814.302(a), and that such standards are being used for construction of Parcel 2.

9. That, as demonstrated in the Significant Modification Application, he knows that the design of the bottom liner for the remaining portion of Section 3 and all of Section 4 of Parcel 1 consisted of a five-foot thick compacted clay liner, and that the compacted clay tested for demonstration in the Application had an average permeability of 2.6×10^{-8} cm/sec, and a maximum permeability of 8.5×10^{-8} cm/sec, which permeabilities exceed the performance standard of 1×10^{-7} cm/sec for Subpart C facilities.

10. That he is aware that an intermediate leachate collection and management system was planned and is being installed on the initial portion of Section 3, which portion was constructed prior to issuance of the Significant Modification Permit, above waste that was already placed in that portion; and, further, that he believes that the design of such system satisfies or exceeds the requirement of Subpart C, set forth in 35 Ill. Adm. Code 814.302(b)(1).

11. That he estimates that Carus spent at least \$90,000 more than otherwise necessary under Subpart D to "over-design" and construct the remaining sections of Parcel 1 to the same standards as Parcel 2, which standards exceed the Subpart D standards and meet or exceed the Subpart C standards.

12. That he knows that the only requirement of Subpart C possibly not satisfied by the design of the remaining portion of Section 3 and Section 4 is performance of a groundwater impact assessment model, pursuant to 35 Ill. Adm. Code 811.317 and 811.318(c), which model is not required for Subpart D facilities; but that he also knows that Andrews performed such a model focused on Parcel 2 of the Carus Landfill which model was included in the Significant Modification Application, and furthermore believes that if such a model were performed for the remaining portions of Parcel 1, the results of such model would be comparable to the results of the model for Parcel 2 and therefore unnecessary for Parcel 1, and states that his belief is based on the close proximity of Parcel 1 to Parcel 2, based on the same technical standards being used to design, construct and operate Sections 3 and 4 and Parcel 2, and based on his familiarity with the model parameters and input data, with the Carus Landfill and with the hydrogeology of the site and surrounding areas.

13. That he knows that information submitted in the Significant Modification Application demonstrated that Parcel 1 satisfied the groundwater standards of 35 Ill. Adm. Code 814.402(b)(3); that these groundwater standards are based on compliance with the applicable Part 302 water quality standards at the waste boundary, in contrast to the groundwater quality standards set forth in 35 Ill. Adm. Code 811.320(a)-(c), applicable to Subpart C facilities, which are based on, in part, on background concentrations at or beyond a zone of attenuation; that because Section 814.402(b)(3) standards do not allow for a zone of attenuation, except by

adjusted standard, they are therefore generally more stringent than the standards of Section 811.320(a)-(c) applicable to Subpart C facilities; and that he believes that Parcel 1 would meet the less stringent groundwater quality standards under Subpart C.

14. That he estimates that the additional cost necessary to perform a groundwater impact assessment model for Parcel 1 would exceed \$35,000.

15. That he estimates, based on recent and historical site surveys, that the remaining air space in Sections 3 and 4 as of May 31, 1997, is approximately 21,952 cubic yards, and is aware, based on recent waste disposal rates by Carus, that it will take Carus in excess of one year to fill this remaining air space.

16. That he knows that the construction of Parcel 2 of the Carus Landfill was originally expected to be completed in time for approval of waste placement by September 18, 1997, and that excavation began last year; but that he knows that construction has been delayed by at least three months, that the reason for this delay is that thicker glacial materials and harder shale than originally anticipated were encountered during excavation this Spring, and that it will be virtually impossible for the liner for Parcel 2 to be constructed and approved by September 18, 1997 for placement of waste by Carus.

17. That he believes that, given the small average rate of waste disposal by Carus, the optimal time to begin waste placement in Parcel 2 is after the Winter of 1997-1998 so that Carus will have several months to place sufficient waste (*i.e.*, an initial 5-foot waste layer) on the bottom liner prior to the onset of weather conditions that may cause the compacted earth liner to freeze, in order to comply with 35 Ill. Adm. Code 811.321(b).

FURTHER AFFIANT SAYETH NOT.

Bryan C. Johnsrud
Bryan Johnsrud, P.E.

Subscribed and sworn to before me this 2nd day of July, 1997.



(SEAL)

Ruth Kuchen-Holmes
Ruth Kuchen-Holmes - Notary Public

My Commission Expires: 09-25-98