

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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JUN 30 2004

STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:)
)
PETITION OF JOHNS MANVILLE)
FOR AN ADJUSTED STANDARD FROM)
35 ILL.ADM. CODE PART 814, §§ 811.310,)
811.311, 811.318)
)
)

AS 04- 04
(Adjusted Standard-Land)

NOTICE OF FILING

To: Attached Service List

Please take notice that on June 30, 2004, Johns Manville has filed the attached adjusted standard petition, a copy of which is hereby served upon you.

Johns Manville, Petitioner.

By: Edward P. Kenney
One of Its Attorneys

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Safe Drinking Water Act, Comprehensive Environmental Response, Compensation and Liability Act, Clean Air Act, or the State programs concerning RCRA, UIC, or NPDES. The regulations in question implement State, not federal requirements.

Level of Justification 35 Ill.Adm.Code § 104.406(c)

The regulations for which the adjusted standards are sought do not contain specified levels of justification, so the factors set forth in Section 28.1(c) of the Act apply to this petition. As will be described in more detail below, JM can establish that: the factors relating to its onsite landfill are substantially different from the factors relied upon by the Board in adopting the regulations of general applicability; the existence of these different factors justifies an adjusted standard; the requested standard will not result in environmental health effects more adverse than the effects considered by the Board in adopting the rules of general applicability; and, the adjusted standard is consistent with applicable federal law. The justification for this adjusted standard is set forth below.

BACKGROUND OF JOHNS MANVILLE'S ONSITE LANDFILL

Description of Petitioner's Activities 35 Ill.Adm.Code § 104.406(d)

JM Facility Background and Regulatory History

JM owns a facility in Waukegan, Illinois in Lake County at which JM previously manufactured building materials, including roofing and insulation products. The facility is located on a tract consisting of approximately 350 acres on the shore of Lake Michigan. The facility began operations *ca.* 1920, and employed several thousand employees at its peak. Historically, asbestos-containing building materials were manufactured at the plant, but all such manufacture of asbestos-containing building materials ceased in 1985. After a gradual phaseout, all of the remaining manufacturing operations at the facility completely ceased in

1998, and the manufacturing buildings (which represented over 1,700,000 square feet under roof) were demolished in 2000-2001. At present, only a few contract employees associated with maintaining the site are located at the facility. As will be described below, the on-site landfill at issue in this proceeding began operations in 1992 and was not used to dispose of asbestos-containing materials. The Illinois Attorney General's Office and Illinois Environmental Protection Agency have acknowledged that the landfill that is subject to this petition is an "existing landfill" and therefore subject to 35 Ill. Adm. Code Part 814. Specific requirements contained in 35 Ill. Adm. Code Part 811, including the provisions for which the adjusted standards are sought, are incorporated by 35 Ill. Adm. Code § 814.302.

In 1983, relying on its authority in Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC § 9605, the United States Environmental Protection Agency (USEPA) placed a portion of the facility (consisting of approximately 120 acres) on the National Priorities List (NPL), which is set forth in 40 CFR Part 300, Appendix B, by publication at 48 Fed. Reg. 40658 (September 8, 1983). The on-site landfill at issue in this petition is physically located on the tract identified on the NPL, and it is located on and surrounded by units that were remediated under CERCLA. On June 14, 1984, JM and USEPA executed an Administrative Order on Consent, under which JM conducted a Remedial Investigation Feasibility Study (RIFS), pursuant to 40 CFR § 300.68. The Remedial Investigation Report was submitted on July 3, 1985, and the Feasibility Study Report was submitted to USEPA in December 1986. USEPA adopted an Addendum to the Feasibility Study Report on January 28, 1987. After notice and public hearing, on June 30, 1987 USEPA issued a Record of Decision (ROD) in which the State of Illinois concurred. The ROD provided for the placement of cover over a number of areas at which asbestos containing waste materials had

been disposed of at the JM facility. JM, USEPA and the State of Illinois executed a consent decree that implemented the ROD, and that consent decree was entered by the United States District Court for the Northern District of Illinois on or about March 18, 1988, in United States v. Manville Sales Corporation, C.A. No. 88C 630.

In addition to providing for cover of historical disposal areas, the Consent Decree contemplated that ongoing non-asbestos manufacturing operations at the JM site would continue. The Consent Decree therefore provided for ongoing operation of both the wastewater treatment system, which consisted of a number of settling and retention basins, as well as the onsite landfill. JM conducted substantial remedial actions at the facility, placing cover over the historic areas where asbestos containing waste materials had been disposed. JM's remedial activities were largely completed in 1991.

USEPA issued two Explanations of Significant Differences (ESD), the first on February 9, 1993, and the second on September 22, 2000. The first ESD addressed primarily the differences between the remedial action as described in the June 1987 ROD and the remedial action actually constructed as necessitated by field conditions. The second ESD provided, in light of cessation of manufacturing operations at the facility, for closure of both the wastewater treatment system and the on-site landfill which is the subject of this petition.

Description of Nature of Efforts Necessary to Comply With Regulations of General Applicability, 35 Ill. Adm. Code § 104.406(e)

Because the onsite landfill is located in the midst of the CERCLA site, any activities relating to it must be coordinated with both USEPA and IEPA. The United States Department of Justice, USEPA, Illinois Attorney General's Office, IEPA, and JM signed an amended federal consent decree which was lodged with the United States District Court for the Northern District of Illinois on February 11, 2004 (notice published at 69 Fed. Reg. 7982

(February 20, 2004)). Comments have been filed, and a responsiveness summary is due to be filed by July 16, 2004. JM anticipates the federal amended consent decree will be entered by the Court in the near future. The Illinois Attorney General's Office, IEPA and JM have also signed a consent order which addresses this landfill. This consent order should be submitted to the Lake County Circuit Court for approval in the near future. Both the federal amended consent decree and consent order provide for final closure of the landfill that is subject of this petition, and this adjusted standard petition should result in final closure in the most effective and expeditious manner. JM advised the agencies of the probable need for an adjusted standard in the negotiations which resulted in the federal amended consent decree, and the State Consent Order, and each of these documents specifically provides for the filing of an adjusted standards petition. Therefore, this adjusted standard proceeding will not be contrary to either document when and if they are entered; it will in fact, assist in implementation of these documents.

JM's On-site Landfill

JM's on-site landfill has always operated pursuant to the statutory permit exception contained in Section 21(d) of the Act, 415 ILCS 5/21(d); since JM has used the onsite landfill to dispose of only that waste generated by its own activities at this location, JM has neither received nor been required to hold an IEPA solid waste operating permit. Pursuant to 35 Ill. Adm. Code § 815.200 et seq., JM submitted its initial facility report to IEPA in September 1992. As described in the initial facility report and as operated, the onsite landfill consisted of two areas: 1) the miscellaneous disposal pit, that was constructed on top of clean fill that had been placed during CERCLA remedial activities and 2) a portion of the collection basin, which had formerly been operated as part of the wastewater treatment system. These units are depicted in Figure 1 (Site Plan).

The initial facility report filed in 1992 indicated JM's intention to operate the onsite landfill as an inert waste landfill, based on leachate data for the wastes that were intended to be placed in the onsite landfill. During its operating history from 1992 to 1998, the predominant waste that was placed in the landfill was calcium silicate, an inert, nonhazardous material used by JM to produce T-12, a high temperature calcium silicate block insulation material.

JM also disposed of lesser quantities of roofing materials, wood, paper, and cardboard, materials that IEPA considers to be putrescible wastes. Because the onsite landfill arguably meets the definition of "existing facility or existing unit" contained in 35 Ill. Adm. Code § 810.103, the onsite landfill is subject to the standards for existing landfills and units, set forth in 35 Ill. Adm. Code Part 814, pursuant to 35 Ill. Adm. Code § 814.101.

In order to accomplish the most efficient final closure that considers the landfill contents and the landfill's location on units previously remediated under CERCLA, JM is seeking an adjusted standard for (i) the Monitoring Frequency for Landfill Gas Monitoring (35 Ill. Adm. Code § 811.310(c)(1)), (ii) the requirements for implementing a Landfill Gas Management System, specifically, the provisions relating to detection distance for implementing such a system (35 Ill. Adm. Code § 811.311(a)(1)), and (iii) the Standards for the Location of Monitoring Points found in 35 Ill. Adm. Code § 811.318(b)(4), specifically, the requirement that monitoring wells shall be located within half the distance from the edge of the potential discharge source to the edge of the zone of attenuation.¹

¹ The costs of complying with the regulations are very difficult to quantify because, as described below, compliance with the regulations as adopted would involve drilling gas monitoring devices and groundwater monitoring wells through engineered cover that was built pursuant to the Superfund remedial activities at the site. The motivation for this adjusted standard is not to provide for lower costs, but to prevent the adverse effects that could result from installing the gas monitoring and groundwater wells in locations that would damage the cover of the remediated

Narrative Description of Proposed Adjusted Standard, 35 Ill. Adm. Code § 104.406(f)

**PROPOSED ADJUSTED STANDARD FOR LANDFILL GAS MONITORING
FREQUENCY REQUIREMENTS**

In adopting its comprehensive regulations governing nonhazardous waste landfills, the Pollution Control Board specifically addressed two broad types of landfills: landfills for inert waste, and landfills for chemical and putrescible wastes.² The Board later adopted requirements for municipal solid waste landfills in order to ensure that the state regulations met the requirements for the Resource Conservation and Recovery Act (RCRA) Subpart D program. Because the landfill in question here is not a municipal solid waste landfill (and is therefore not addressed in the federal program), granting the petition sought here will in no way be inconsistent with federal requirements³. There are also no federal procedural requirements that would apply to this petition.

As discussed above, JM originally contended that its on-site landfill was properly characterized as an inert waste landfill, because the wastes placed in the landfill were primarily inert (calcium silicate materials, concrete, and similar materials)⁴. However, IEPA advised that

areas and potentially create pathways for migration of contaminants.

² The Pollution Control Board has also adopted special requirements for other types of landfills, (e.g., landfills used for certain wastes from iron and steel manufacturing facilities and foundries (see 35 Ill. Adm. Code Part 817)). These regulations contain three classes of waste, and wastes which present more potential to generate potentially harmful leachate are subject to more stringent requirements.

³ Moreover, both the federal amended consent decree and the State consent order described above would require final closure of the landfill that is the subject of this petition.

⁴ The requirements for inert waste landfills are considerably less stringent than those for chemical and putrescible and municipal solid waste landfills, due to significant differences between the types of materials disposed of in each type of landfill. Unlike chemical or putrescible landfills and municipal solid waste landfills, inert waste landfills need not have gas collection systems, groundwater monitoring systems or leachate collection systems, on the theory that the leachate generated by inert waste landfills is so innocuous in terms of quantity

the presence of materials like wood, cardboard and paper in the landfill *in any amount* meant that the landfill should be more properly characterized as a chemical and putrescible waste landfill.

The requirements in 35 Ill. Adm. Code § 811.310(c)(1) (applicable to chemical and putrescible landfills but not to inert waste landfills) specify that landfill gas monitoring devices shall be operated to obtain samples on a monthly basis for the entire operating period and for a minimum of five years after closure. Given the nature of the wastes disposed in the On-Site Landfill, studies were undertaken to determine the general physical properties within the landfill and whether landfill gas was currently present within or outside the landfill limits in quantities that might warrant the required level of monitoring.

As described in the Site Investigation Report for the On-Site Landfill, it was determined that methane generation was more consistent with an inert waste landfill, rather than a typical chemical and putrescible landfill. Specifically, the following observations were made:

- Measured landfill gas temperatures (approximately 50°F) were not typical of landfill gas temperatures in a solid waste landfill, which typically ranges from 100 to 130 °F during substantial anaerobic activity and between 130 and 160 °F during substantial aerobic activity.
- The vegetative grass cover over the landfill was intact, growing and healthy, and showed no signs of burn-out, which is indicative of methane release to the landfill surface. Moreover, there are no buildings, structures or utilities on or around the landfill that could serve as a conduit for relieving methane pressures.
- Landfill gas pressures measured in monitoring wells were typically extremely low (less than 0.01" of water). This indicates negligible gas generation.
- No malodors were noted within the landfill at any time, indicating little or no landfill gas generation.
- The carbon dioxide levels in the On-Site Landfill were measured to be less than 1%. This is not consistent with an active chemical and putrescible landfill, where the levels of carbon dioxide typically range from 40-48%.

and constituents that such systems are not warranted. Final cover for inert waste landfills consists of a minimum three foot thick layer of soil capable of supporting vegetation. In contrast, final cover for chemical and putrescible landfills and municipal solid waste landfills must consist of a low permeability layer with a thickness of at least three feet (or equivalent) overlain by a protective layer with a thickness of at least three feet.

- No methane was present above regulatory criteria (50% of the Lower Explosive Level (LEL)) outside the limits of the waste boundary, despite the lack of any landfill gas collection system. Given that wastes have not been added to the On-Site Landfill for almost six years, and that very little additional wastes, if any, are expected to be added in the future, it is unlikely that the landfill gas generation rate would increase, thereby resulting in an increased potential to detect migrating landfill gas.

These results were not particularly surprising, in light of the relatively low percentage of organic material disposed in the landfill, and the relatively small size of the units. While the on-site Landfill may technically meet the requirements for chemical and putrescible waste landfills, the above-described data confirm that the landfill is actually more similar to the inert waste landfills considered by the Board in adopting the regulations. As a result, the frequency of landfill gas monitoring as technically required by 35 Ill. Adm. Code § 811.310(c)(1) is not necessary and would not provide any additional degree of protection to human health or the environment as compared to the proposed adjusted standard.

For all of these reasons, JM is proposing the following adjusted standard:

“In lieu of compliance with 35 Ill. Adm. Code § 811.310(c)(1) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall operate all gas monitoring devices, including the ambient air monitors, such that samples will be collected on a semi-annual basis for a period of five years following approval of this adjusted standard. If, at the end of five years, the requirements for implementing a Landfill Gas Collection System (35 Ill. Adm. Code § 811.311) are not met, no further monitoring will be conducted.

Based on the data collected, compliance with the proposed adjusted standard will not have a more adverse effect on the environment than would compliance with the regulations.

PROPOSED ADJUSTED STANDARD FOR IMPLEMENTATION OF A LANDFILL GAS MANAGEMENT SYSTEM

As shown on Figure 2 (Proposed Landfill Gas Monitoring Device Locations), the miscellaneous disposal pit unit (Fill Area #1) is located within the aerial limits of the remediated

area of the CERCLA site. The On-Site Landfill is essentially a landfill constructed within and overlying the "CERCLA" landfill that was previously closed through placement of a two-foot engineered cover over both topographically flat areas, as well as the steeply sloping sides of the original miscellaneous disposal pit. The lateral limits of the steeply sloping sides are shown on Figure 2. The regulations governing implementation of a Landfill Gas Collection System (35 Ill. Adm. Code § 811.311(a)(1)) contemplate detection of elevated methane levels below the "ground surface" at a distance of 100 feet outside the edge of the unit, or at the property boundary, whichever is closer. As the property boundary is further away, the distance of 100 feet from the edge of the unit would appear to apply. However, at this distance (100 feet) from the edge of Fill Area #1 within the On-Site Landfill, the monitoring locations would fall on the steep side slopes and covered areas within the now-closed CERCLA landfill.

Landfill gas monitoring at this location would require installation of monitoring wells on the steeply sloping sides and through the engineered cover placed for closure of the CERCLA landfill. Installation, monitoring, and maintenance of wells installed within this steep incline may result in compromising the integrity of the CERCLA cover and thereby trigger maintenance obligations not otherwise required, as well as potentially expose the now-covered asbestos materials to personnel collecting the air samples and/or cause the release of asbestos fibers to ambient air. Furthermore, it is not clear whether monitoring for landfill gas beneath the cover of an adjacent landfill meets the intention of "ground surface," in that the goal is to detect whether elevated levels of methane generated within the On-Site Landfill are migrating away from that unit. As a result, locating the landfill gas monitoring devices at a distance of 100 feet from Unit #1, as technically required by 35 Ill. Adm. Code § 811.311(a)(1) would be very burdensome, potentially harmful to the CERCLA remedy, and due to the extremely low levels of

gas generated, would not provide any additional degree of protection to human health or the environment.

For all of these reasons, JM is proposing the following adjusted standard:

“In lieu of compliance with 35 Ill. Adm. Code § 811.311(a)(1) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall install a gas management system if a methane concentration greater than 50 percent of the lower explosive limit in air, is detected below the ground surface by a monitoring device or is detected by an ambient air monitor located at 200 feet from the edge of the unit or the property line, whichever is less.”

Based on the data collected, compliance with the adjusted standard proposed will not have a more adverse effect on the environment than would compliance with the regulations.

PROPOSED ADJUSTED STANDARD FOR THE LOCATIONS OF GROUNDWATER MONITORING WELLS

As shown on Figure 3 (Proposed Groundwater Monitoring Well Locations), the miscellaneous disposal pit unit (Fill Area #1) is located within the aerial limits of the remediated area of the CERCLA site. The On-Site Landfill is essentially a landfill constructed within and overlying the “CERCLA” landfill that was previously closed through placement of a two-foot engineered cover over both topographically flat areas, as well as the steeply sloping sides. The lateral limits of the steeply sloping sides are shown on Figure 3. The regulation governing the Design, Construction, and Operation of Groundwater Monitoring Systems (35 Ill. Adm. Code § 811.318(b)(4)) contemplates locating the monitoring wells within half the distance from the edge of the potential source of the discharge to the edge of the zone of attenuation downgradient, with respect to groundwater flow, from the source. However, at this distance from the edge of the On-Site Landfill (50 feet), the monitoring locations would fall on the steep side slopes and covered areas of the now-closed CERCLA landfill.

Groundwater monitoring at this location would require installation of monitoring wells on the steeply sloping sides and through the engineered cover placed for closure of the CERCLA landfill. Installation, monitoring, and maintenance of wells installed within this steep incline may result in compromising the integrity of the CERCLA cover and thereby trigger maintenance obligations not otherwise required, as well as potentially expose the now-covered asbestos materials to personnel collecting the air samples and/or cause the release of asbestos fibers to ambient air. As a result, locating groundwater monitoring wells at a distance of 50 feet from Unit #1, as technically required by 35 Ill. Adm. Code § 811.318(b)(4) would be very burdensome, potentially harmful to the CERCLA remedy, and would not provide any additional degree of protection to human health or the environment.

For all of these reasons, JM is proposing the following adjusted standard:

“In lieu of compliance with 35 Ill. Adm. Code § 811.318(b)(4) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall install groundwater monitoring wells at a distance of no more than 200 feet from the edge of the unit or the property line, whichever is less.”

Based on the data collected, compliance with the adjusted standard proposed will not have a more adverse effect on the environment than would compliance with the regulations.

Description of Impact of Compliance With General Standard As Compared to Proposed Adjusted Standard, and Justification, 35 Ill. Adm. Code §§ 104.4-6(g)-(h)

For the reasons described above, compliance with the Proposed Adjusted Standard will be, at a minimum, equally protective of the environment as would compliance with the regulations of general applicability. JM believes that granting the adjusted standard would be justified for the reasons set forth above, and would create a lesser risk of damage to the remediated areas at the Superfund site.

Board May Grant Adjusted Standard Consistent With Federal Law, 35 Ill.Adm.Code § 104.406(i)

As described above, if the Board were to grant the adjusted standard, it would in no way be contrary to federal statutory or regulatory requirements. Moreover, the federal consent decree described above, expressly contemplated that an adjusted standard petition could be filed, so granting the adjusted standard would not be inconsistent with any federal judicial order or consent decree.

Hearing Requested 35 Ill.Adm.Code 104.406(j)

JM has discussed these proposed adjusted standards with the Illinois Environmental Protection Agency(IEPA), and is requesting the Agency's concurrence. If Agency concurs with this petition, it may not be necessary to have a hearing (assuming that members of the public do not request one. If the IEPA concurs with the petition, and there are no requests for a hearing from the public or other interested parties, JM can waive its request for a hearing.

Documentation to Be Relied Upon, 35 Ill.Adm.Code § 104.406(k)-(l)

As described above, JM has collected data which is in the form of a Site Investigation Report. This document is very voluminous, and can be submitted in the future.

CONCLUSION

For the reasons set forth above, JM respectfully requests that the Pollution Control Board grant the adjusted standards to 35 Ill.Adm.Code Part 814, incorporating 35 Ill.Adm.Code §§ 811.310, 811.311, and 811.318 as described in this petition, and as set forth below:

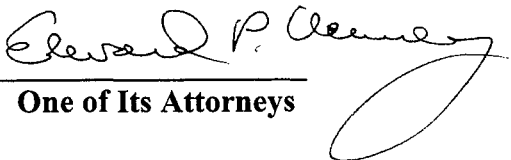
“In lieu of compliance with 35 Ill.Adm.Code § 811.310(c)(1) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall operate all gas monitoring devices, including the ambient air monitors, such that samples will be collected on a semi-annual basis for a period of five years following approval of this adjusted standard. If, at the end of five years, the requirements for implementing a Landfill Gas Collection System (35 Ill.Adm.Code § 811.311) are not met, no further monitoring will be conducted.”

“In lieu of compliance with 35 Ill.Adm.Code § 811.311(a)(1) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall install a gas management system if a methane concentration greater than 50 percent of the lower explosive limit in air, is detected below the ground surface by a monitoring device or is detected by an ambient air monitor located at 200 feet from the edge of the unit or the property line, whichever is less.”

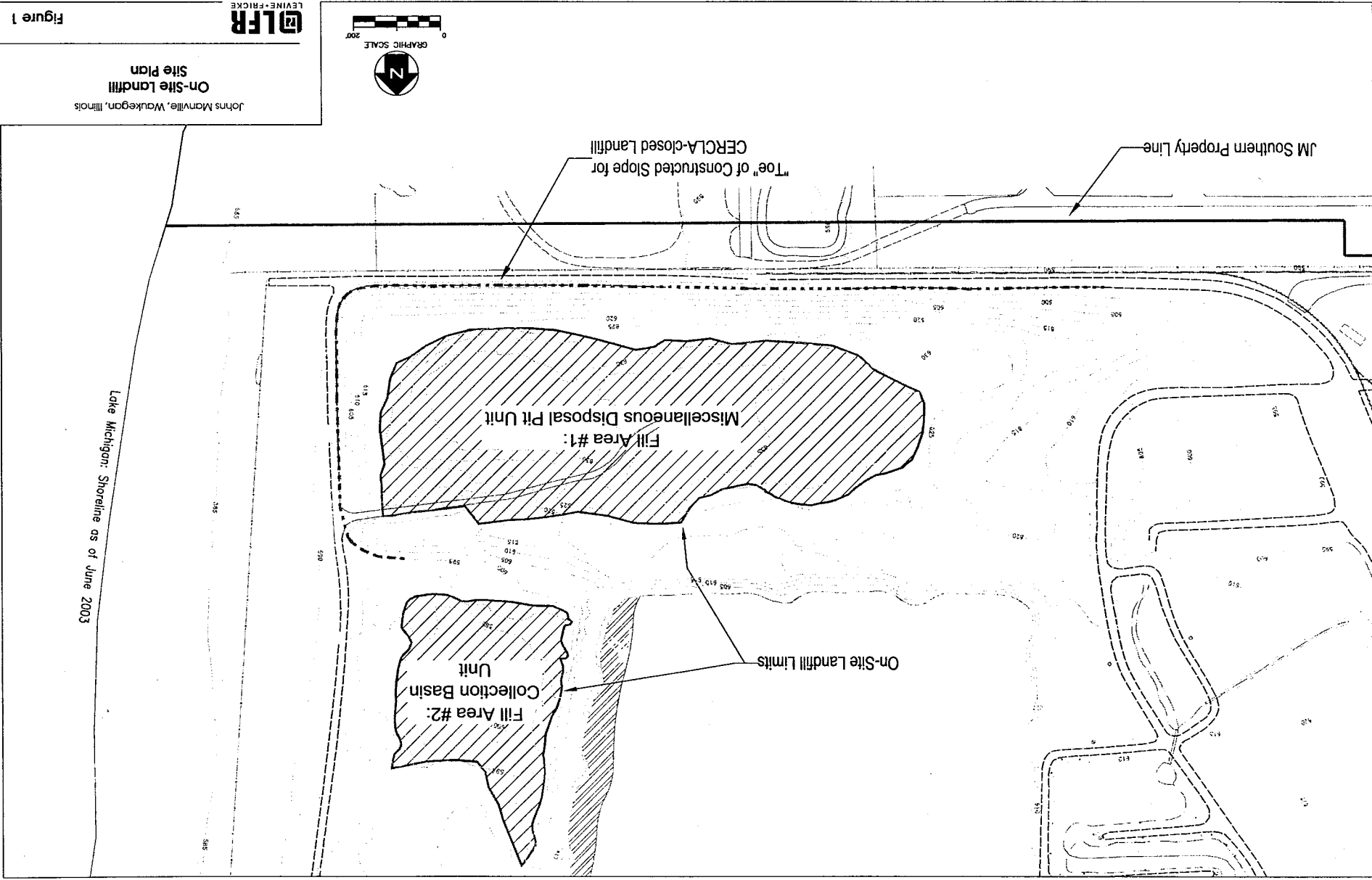
“In lieu of compliance with 35 Ill.Adm.Code § 811.318(b)(4) as applied to the On-Site Landfill at its facility in Waukegan, Illinois, Johns Manville shall install groundwater monitoring wells at a distance of no more than 200 feet from the edge of the unit or the property line, whichever is less.”

Respectfully submitted,

**JOHNS MANVILLE,
Petitioner,**

By: 
One of Its Attorneys

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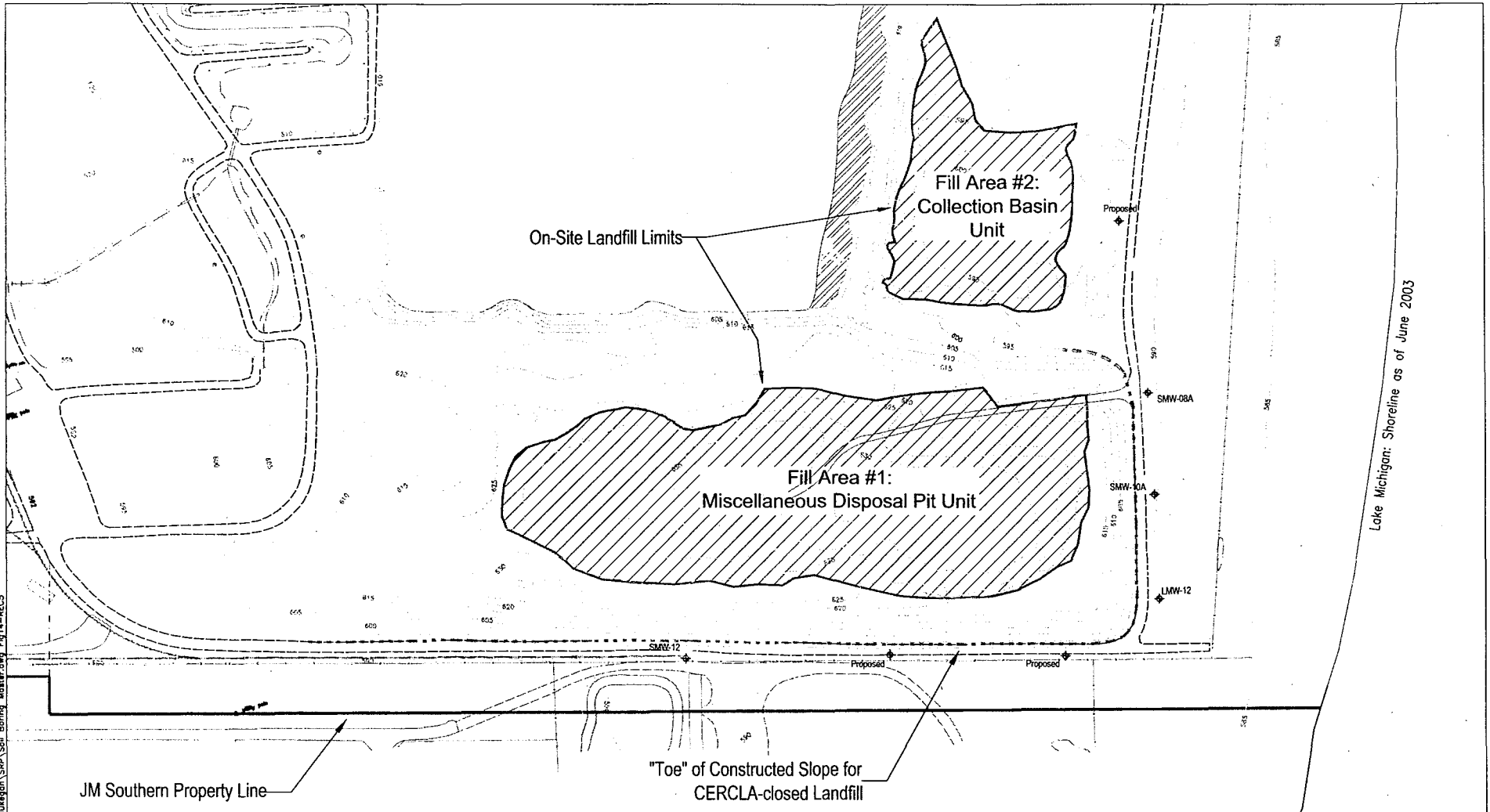


Johns Manville, Waukegan, Illinois
On-Site Landfill
Site Plan



Figure 1

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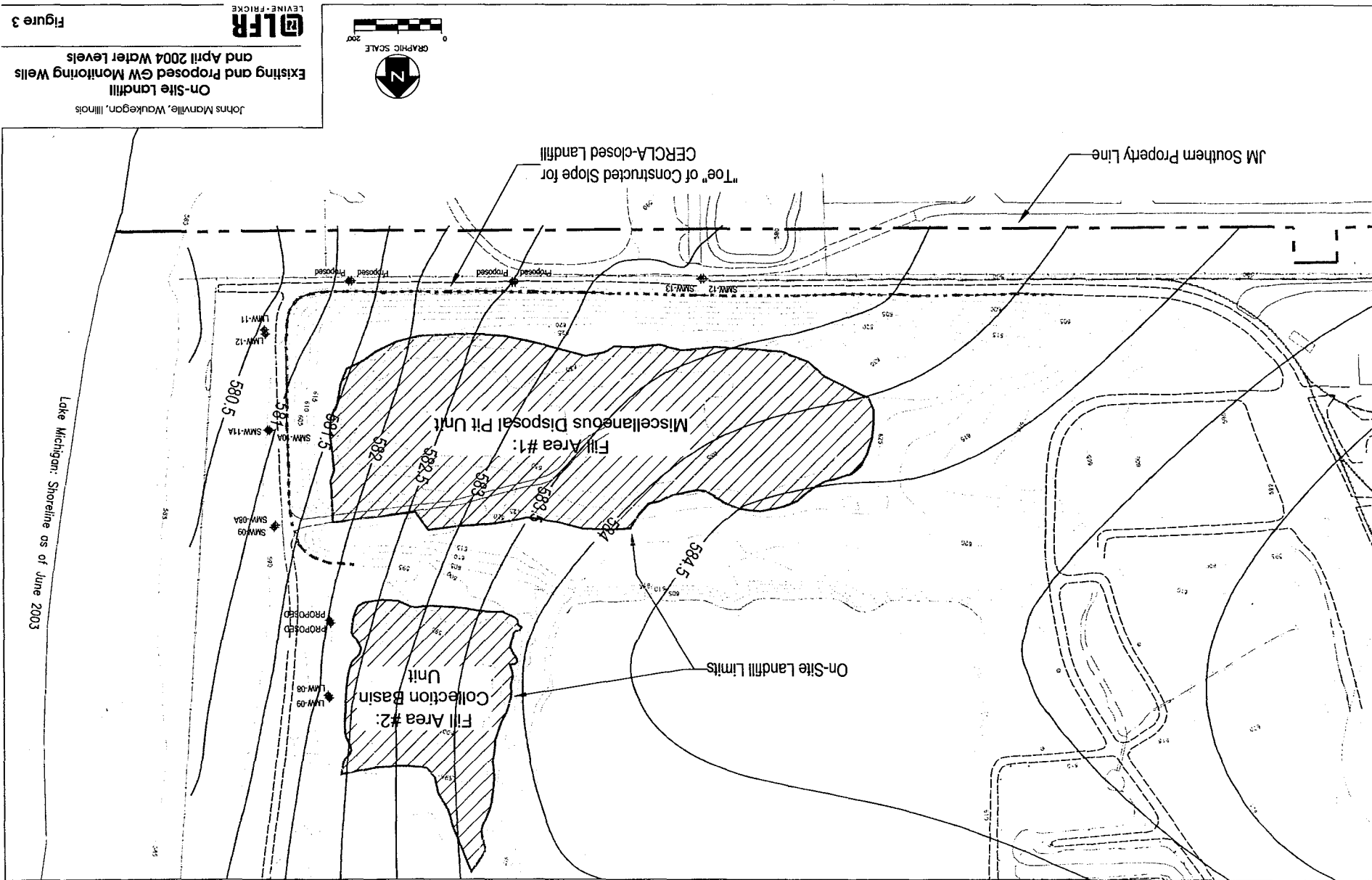


Lake Michigan: Shoreline as of June 2003

Johns Marville, Waukegan, Illinois
On-Site Landfill
Proposed Location of
Below-Ground Landfill Gas Monitors

LFR
 LEVINE-FRITKE

Figure 2



Johns Manville, Waukegan, Illinois
On-Site Landfill
Existing and Proposed GW Monitoring Wells
and April 2004 Water Levels
DLFR LEVINE-FRISKE
 Figure 3

CERTIFICATE OF SERVICE

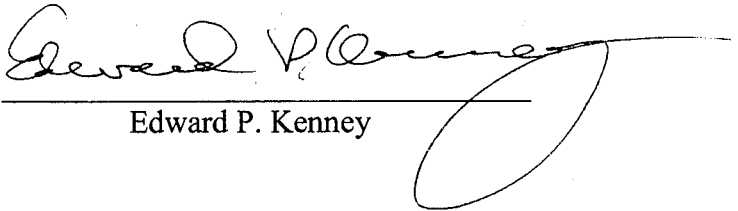
The undersigned, an attorney, hereby certifies that he caused the foregoing notice and petition for adjusted standard to be served upon:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
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Peter Orlinsky
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by placing the same in the United States mail, first-class postage prepaid, this 30th day of June, 2004.



Edward P. Kenney