

ILLINOIS POLLUTION CONTROL BOARD  
March 5, 2015

IN THE MATTER OF: )  
)  
PETITION OF BRICKYARD DISPOSAL & ) AS 14-3  
RECYCLING, INC. FOR ADJUSTED ) (Adjusted Standard – Land)  
STANDARD FROM SOLID WASTE )  
REGULATIONS )

OPINION AND ORDER OF THE BOARD (by C.K. Zalewski):

On June 27, 2014, Brickyard Disposal & Recycling (Brickyard) filed a petition for an adjusted standard (Pet.) pursuant to Section 28.1 of the Environmental Protection Act (Act) and Section 814.402(b)(3) of the Board’s landfill regulations. 415 ILCS 5/28.1 (2012); 35 Ill. Adm. Code 814.402(b)(3). Brickyard seeks an adjusted compliance boundary and the designation of a zone of attenuation as well as relief from specified groundwater monitoring requirements found at Sections 810.103, 811.318(b)(3), and 811.320(c) of the Board’s solid waste regulations. 35 Ill. Adm. Code 810.103, 811.318(b)(3), 811.320(c). Brickyard is located at 601 Brickyard Road, Danville, Vermilion County.

On November 6, 2014, Brickyard filed an amended petition (Am. Pet.) addressing the informational deficiencies identified in a September 18, 2014 Board order. Petition of Brickyard Disposal & Recycling, Inc. for an Adjusted Standard Pursuant to 35 Ill. Adm. Code 814.402(B)(3) and from 35 Ill. Adm. Code 810.103, 811.318(b)(3), and 811.320(c), AS 14-3 (Sept. 18, 2014). On November 18, 2014, the Board received the Illinois Environmental Protection Agency’s (IEPA or Agency) recommendation (Rec.) that the Board grant Brickyard’s amended request for an adjusted standard. No public hearing was requested or held in this matter.

In the following opinion and order, the Board provides the procedural background and a description of the Brickyard facility before summarizing the filings in this matter. The Board discusses the regulations from which Brickyard seeks relief and the legal framework for granting adjusted standards before making the Board’s findings on Brickyard’s petition. Those include a finding that Brickyard has sufficiently demonstrated that the factors relating to Brickyard are substantially and significantly different from the factors considered by the Board in adopting the rules of general applicability for the definition of the zone of attenuation, location of groundwater monitoring wells, and the determination of the zone of attenuation. *See* 35 Ill. Adm. Code 810.103, 811.318(b)(3), 811.320(c). Further, the Board finds that those factors justify an adjusted standard and that an adjusted standard is consistent with federal law. The Board also finds that 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. Finally, the Board finds that Brickyard has sufficiently addressed the factors as they relate to the designation of the zone of attenuation and adjusted compliance boundary under Section 814.402(b)(3). Therefore, the Board grants the adjusted standard with conditions as set forth in the Board's order.

## **PROCEDURAL HISTORY**

In its June 27, 2014 petition, Brickyard waived the public hearing afforded by Section 104.422 of the Board's procedural rules. Pet. at 25; 35 Ill. Adm. Code 104.422. On August 12, 2014, the Board received the Agency's recommendation (Rec.) that the Board deny Brickyard's request for an adjusted standard. On August 27, 2014, Brickyard filed a response (Res.) to the Agency's recommendation. The Board issued an order on September 18, 2014, finding that Brickyard had satisfied the requirement of newspaper notice and accepting the petition but directing Brickyard to file an amended petition addressing certain deficiencies. Brickyard Disposal & Recycling, AS 14-3 (Sept. 18, 2014).

Specifically, the Board asked Brickyard to clarify what it meant by the terms "water bearing zone" and "groundwater" in its petition. Brickyard Disposal & Recycling, AS 14-3, slip op. at 3 (Sept. 18, 2014). The Board also asked Brickyard to provide more information on the various institutional controls Brickyard proposed and Brickyard's intended long-term maintenance of the proposed cover plan. *Id.* at 4-5. Finally, the Board asked Brickyard to clarify how the "average annual high water mark" as proposed in the petition is consistent with the requirements of 35 Ill. Adm. Code 814.402(b)(3)(H). *Id.* at 5. On November 6, 2014, Brickyard filed an amended petition (Am. Pet.). On November 18, 2014, the Agency filed its amended recommendation (Am. Rec.) that the Board grant Brickyard's amended petition for an adjusted standard.

## **FACILITY DESCRIPTION**

Brickyard is located in Vermilion County near Danville, Illinois and provides waste disposal and recycling services to Vermilion County and the surrounding east central Illinois region. Pet. at 1. Brickyard's landfill facility consists of two separate waste units: Unit I ("Brickyard I") and Unit II ("Brickyard II"), separated by a haul road. *Id.* Together the units cover approximately 152 acres within a 293 acre site. *Id.* Brickyard II, located north of Brickyard I, is still an operational landfill and is not relevant to this Petition. *Id.*

This Petition concerns Brickyard I, which is an "existing landfill" under the Board's landfill regulations. Pet. at 2. Brickyard I was initially permitted by the Agency in 1981, but ceased accepting waste in 1997, and initiated closure at that time. *Id.* Brickyard has been in the closure process since 1997, in accordance with 35 Ill. Adm. Code Part 814, Subpart D ("Subpart D") of the Board's landfill regulations. *Id.* The Petitioner intends to seek final closure and post-closure care certification approvals from the Agency, but contends that it needs this adjusted standard to obtain those approvals from the Agency. *Id.*

During the landfill's operation, railroad ties and other construction debris which Brickyard refers to as "extraneous material" were deposited in an area contiguous to the landfill ("fill area"). The Brickyard I closure process has been complicated by the presence of the fill area. The extraneous materials within the fill area push up against the edge of the landfill unit and provide structural stability and support for the landfill. Pet. at 22. Therefore, the fill area must be given consideration in the final closure of the landfill, according to Brickyard, so that

groundwater monitoring captures a comprehensive sample of the water under the landfill without compromising the fill area and the integrity of the landfill support structure. Pet. at 2-3, 22.

## **FILINGS BEFORE THE BOARD**

### **Original Petition**

Brickyard filed its original petition (Pet.) on June 27, 2014, requesting that the Board grant an adjusted standard pursuant to Section 28.1 of the Act (415 ILCS 5/28.1), Part 104 of the Board's procedural rules (35 Ill. Adm. Code 104), and Section 814.402(b)(3) of the Board's landfill regulations (35 Ill. Adm. Code 814.402(b)(3)). Pet. at 1. Because the rule of general applicability at Section 814.402(b)(3) provides a level of justification required of a petitioner for an adjusted compliance boundary and designation of a zone of attenuation, in its original petition Brickyard addressed each of the Section 814.402(b)(3) factors to support the requested adjustment to the compliance boundary and zone of attenuation. *See Id.* at 26-32. With regard to the relief requested from groundwater compliance provisions of the Board's solid waste regulations, (35 Ill. Adm. Code 810.103, 811.318(b)(3), 811.320(c)), Brickyard relied on factors listed in Section 28.1(c) of the Act because the rules of general applicability do not specify a level of justification. *See* 415 ILCS 5/28.1 (2012); Pet. at 4-13.

Brickyard argued that its petition meets the factors set out in Section 28.1(c) of the Act. 415 ILCS 5/28.1(c) (2012). Brickyard explained that the presence of the extraneous materials has resulted in a landfill perimeter substantially different from what the Board considered when adopting Sections 810.103, 811.320(c), and 811.318(b)(3). Pet. at 5-6. Brickyard argued that the "fill area provides support and stabilization of the existing landfill" and that "environmentally responsible final closure must consider this [fill] area when seeking final closure and post-closure care permitting for Brickyard I." *Id.* at 7. Brickyard argued that 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. *Id.* at 10. Brickyard argued that placement of monitoring wells just outside of the fill area will provide accurate groundwater quality data, thus minimizing false reports of contamination and minimizing any potentially contaminated area. *Id.* at 13.

Finally, Brickyard asserted that the requested relief is consistent with federal Subtitle D requirements pursuant to Section 28.1(c)(4) of the Act. Pet. at 13; 415 ILCS 5/28.1(c)(4) (2012). Specifically, Brickyard noted that the relevant federal requirement at 40 C.F.R. § 258.40(d) allows the point of compliance with groundwater standards to be determined by the state so long as it is no more than 150 meters (approximately 492 feet) from the waste unit boundary and on the facility property. Pet. at 13, citing 40 C.F.R. § 258.40(d); *see also* Pet. Exh. B at 31. The listed factors, Brickyard maintained, are "conspicuously similar and nearly identical to those found in Section 814.402(b)(3)." *Id.*, citing 35 Ill. Adm. Code 814.402(b)(3). Thus, Brickyard asserted that the adjusted standard will adequately satisfy these requirements. Pet. at 13.

Next, Brickyard addressed how Brickyard's Petition met the Board's requirements under Section 104.406 of its procedural rules. Pet. at 14. Brickyard explained that it employs eight full-time employees and that temporary personnel are utilized on an as-needed basis. Pet. at 17.

Brickyard states that the relevant pollution control equipment already in use at Brickyard I includes both gas and leachate extraction systems. *Id.* Brickyard described that equipment and the systems as follows. The gas extraction system includes 42 vertical extraction wells within Brickyard I, and seven additional vertical gas extraction wells on the periphery of Brickyard I. *Id.* Vacuum lines extend to well headers at each location and tie in to the conveyance line that encircles Brickyard I inside the waste boundary and ties up with the main flare unit located east of Brickyard II. *Id.*

Liquid condensate is conveyed to a leachate storage tank location east of Brickyard II. *Id.* Leachate is extracted from three manholes, which are centrally located within Brickyard I, and discharged to the conveyance line, which runs to the leachate storage tank east of Brickyard II. *Id.* Level sensors discharge liquid from the storage tank via force main to the treatment facility owned by the City of Danville, Illinois. *Id.* at 18. Two types of emissions or releases result from the processes at the Brickyard site: gas and leachate. The gas emissions occur from two permitted facilities: Brickyard Disposal and Recycling, Inc. and Brickyard Energy Partners, LLC. *Id.*; *see also* Pet. Exh. B at 19-20. Brickyard asserted that the reported gas emissions of all monitored parameters are below the permitted levels. *Id.*

In the original petition, Brickyard explains that the only alternative to monitoring in the fill area is removal of the extraneous material outside the landfill. Pet. at 22. Brickyard estimated the cost to remove the extraneous material at \$47,285,326.00. *Id.*, citing Pet. Exh. B at 22, Table 6. In addition to the “extraordinary burden for a facility that is in the process of closures” Brickyard argued that removal would jeopardize the stability of the existing landfill such that the minimum safety factors under the Board’s solid waste regulations (35 Ill. Adm. Code Part 811) could not be met. *Id.*, citing 35 Ill. Adm. Code 811.304(d). Brickyard stated that removing the buried materials would require removal of much of the existing cover and interruption of the gas extraction system, creating both safety and nuisance concerns. *Id.* Such action would require dewatering, which could promote mine void collapse, liner fatigue and possible failure, and other potentially serious problems. *Id.*, citing Pet. Exh. B at 33.

In the original petition, Brickyard requested relief allowing it to place the groundwater monitoring wells outside the waste unit and fill area, but still within an appropriate distance of the waste unit so Brickyard could monitor and timely detect any groundwater exceedances. Pet. at 23. Brickyard announced plans to: submit a permit modification to the Agency for a groundwater monitoring network for Brickyard I consistent with requested relief (Pet. Exh. A); and increase the cover over extraneous materials in areas identified as having less than two feet of protective soil cover. Pet. Exh. C, Sec. 4. Brickyard estimated the implementation costs of the cover at \$573,018. Pet. Table 5.

Brickyard asserted that compliance with the proposed adjusted standard would not increase the impact on the environment as compared to compliance with the regulation of general applicability and would instead potentially decrease the impact by providing much more accurate groundwater results. Pet. at 24. Brickyard contended that if instead Brickyard were required to proceed without the adjusted standard, removal of the fill material could create slope stability problems for Brickyard I, threatening the structural integrity of the landfill and put Brickyard’s employees and the environment at an increased risk of exposure. *Id.* at 22. Brickyard argued

that, without relief, monitoring in the fill area would be ineffective for detecting potential groundwater impacts from the landfill. *Id.* at 21.

Brickyard justified the proposed adjusted standard as required under Section 104.406(h) of the Board's procedural rules, Section 814.402(b)(3) of the Board's landfill regulations, and Section 28.1(c) of the Act. 415 ILCS 5/28.1(c) (2012); 35 Ill. Adm. Code 104.406(h), 814.402(b)(3). Brickyard offered a Technical Support Document to address the 814.402(b)(3) factors. Pet. at 16, Exh. B; *see* 35 Ill. Adm. Code 814.402(b)(3). Brickyard argued that it had fully considered and met the criteria of Section 104.406(h) of the Board's procedural rules and Section 814.402(b)(3) of the Board's landfill regulations. Pet. at 27-32, citing 35 Ill. Adm. Code 814.402(b)(3)(A)-(I). Finally, in addition to its petition for adjusted standard, Brickyard included an "Extraneous Materials Cover Plan" with detail on how Brickyard intends to implement the proposed cover plan. Pet. at 26.

### **The Agency's Recommendation of Brickyard's Original Petition**

On August 12, 2014, the Agency filed its recommendation that Brickyard's June 27, 2014 Petition be denied due to various deficiencies. The Agency noted that it did not receive any citizen inquiry regarding the Petition. Rec. at 2. The Agency did not request a hearing.

The Agency explained that Brickyard is the current holder of permit No. 1994-419-LFM, Modification No. 102, for Brickyard I. Rec. at 2. The Agency indicated that it cannot approve completion of closure unless an adequate groundwater detection monitoring program has been approved and the network of monitoring wells has been installed. *Id.* at 3. These monitoring wells must be modeled and presented for inclusion with the Brickyard I permit. *Id.* at 3.

In the Recommendation, the Agency acknowledged that the main issue relative to installing groundwater monitoring wells is the fill area. Rec. at 4. Further, the Agency agreed with Petitioner that the Board likely did not consider the specifics presented at Brickyard I when enacting the regulations of general applicability at issue in this proceeding. *Id.* at 5. Finally, the Agency asserted that granting the adjusted standard would be consistent with State law, which was enacted to mirror federal rules as they relate to solid waste disposal units under Subtitle D. *Id.* at 29.

The Agency identified eight deficiencies in Brickyard's petition. First, the Agency indicated that the original petition did not clarify the proposed placement of monitoring wells in relation to the proposed compliance boundary and the edge of the unit. Rec. at 6. The Agency argued that Brickyard provided only potential locations for some of the wells within Brickyard's attached exhibits rather than expressly identifying all well locations or which wells Brickyard would like to move. *Id.* The Agency explained that, if the Board does not intend to review location of monitoring wells within this process, the Agency would be willing to review these locations within the post-closure review process. *Id.* at 8.

Second, the Agency asserted that the original petition does not clarify whether Brickyard would be complying with Section 811.318(b)(3) of the Board's solid waste regulations that requires that the monitoring wells be established as close as possible to the potential source of

discharge. Rec. at 8-9, citing 35 Ill. Adm. Code 811.318(b)(3). The Agency noted that the extraneous materials do not uniformly extend to the same distance outside of the compliance boundary. The Agency argued that the Petition, as written, may result in the monitoring wells as far as possible from the landfill unit rather than as close to the potential source as possible as required under Section 811.318(b)(3). *Id.* at 9-10, citing 35 Ill. Adm. Code 811.318(b)(3).

Third, Brickyard's Petition suggested a need to incorporate or integrate the fill areas into the technical strategy for final closure and post-closure care of Brickyard I, which was not acceptable to the Agency. Rec. at 11. The Agency expressed concern that Brickyard did not provide much elaboration on what it meant when it stated that Brickyard is required to "incorporate" or "integrate" the fill area into the technical strategy for final closure, Brickyard may ultimately want to combine the fill area so that it is an expansion of Brickyard I to be covered by post-closure care. *Id.* The Agency requested that Brickyard clarify whether Brickyard's petition is solely for an adjusted standard to move monitoring wells for Brickyard I. *Id.*

Fourth, the Agency explained that Brickyard provides no justification to extend the proposed compliance boundary. Rec. at 12. The Agency noted that Brickyard requested that the compliance boundary exceed 100 feet from the edge of Brickyard I where the groundwater monitoring zone is located and no extraneous material is present. *Id.* The Agency argued that Brickyard cannot expand the compliance boundary beyond the 100-foot mark "for convenience sake to accommodate the GMZ." *Id.* at 12-13. Instead, the Agency suggested that Brickyard place the detection monitoring wells of the finalized groundwater network within the GMZ. *Id.* at 13.

Fifth, the Agency took issue with the location of the compliance boundary and zone of attenuation that Brickyard had placed on the property line instead of within the property line. Rec. at 13. The Agency explained that the phrase "in no case shall the zone of compliance extend beyond the facility property line or beyond the annual high water mark of any navigable surface water," suggests that any compliance boundary must be within the property and not on the property line. *Id.*; 35 Ill. Adm. Code 814.402(b)(3)(H). Accordingly, the Agency requested that Brickyard's map be revised to indicate that the compliance boundary is just inside of the property line. *Id.*

Sixth, the Agency expressed concern that the proposed compliance boundary would extend to 100 feet where the fill area is not present. The Agency argued that Brickyard provided no justification, nor could the Agency come up with a reason, as to why Brickyard sought to move the compliance boundary and establish a zone of attenuation in areas where no extraneous material is present. Rec. at 14.

Seventh, the Agency asserted that the relief expressed within the original petition appeared to change throughout the pleading and support documentation. The Agency requested that inconsistencies be clarified and pointed out other deficiencies as well. Rec. at 14-15. The Agency explained that Brickyard stated that the horizontal extent of the compliance boundary and zone of attenuation is within the Petitioner's property line. However, the new compliance boundary established by Brickyard's Exhibit A, Figure 1, dated June 2014, is on the property

line, and arguably not inside the property line. *Id.* at 15. Further, the Agency noted that the proposed compliance boundary in Exhibit A, Figure 1 incorporated the current groundwater management zone for Brickyard I as a factor in placement of the new compliance boundary. *Id.* at 16. The Agency argued that the new compliance boundary, as proposed in the original petition, may extend beyond 100 feet from Brickyard I. *Id.*

Finally, the Agency stated that the requested relief appeared to extend beyond the 150-meter limit set in Section 814.402(b)(3)(I) of the Board's landfill regulations. *Rec.* at 17; *see* 35 Ill. Adm. Code 814.402(b)(3)(I). The Agency argued that there appeared to be at least two points where the compliance boundary, as proposed in the original petition, would extend beyond 150 meters (approximately 492 feet): in the area between temporary well T120 and T104; and the area near T111 and T110. *Rec.* at 18; *see* Pet. Exhibit A, Figure 1.

In addition to the eight deficiencies discussed above, the Agency also pointed out additional issues with Brickyard's petition. With regard to justification under 35 Ill. Adm. Code 104.406(c), the Agency found Brickyard's discussion on costs lacking. *Rec.* at 23. The Agency claimed that some costs were not provided in a manner that allowed for a straightforward comparison to currently approved closure costs at the Site. *Rec.* at 23; *see* Pet. Exh. B at 22, Table 5. According to the Agency, in order to properly review the cost estimation for extraneous material removal, the Agency must have a detailed breakdown of, or a narrative justification for, those costs associated with final cover augmentation, extraneous material excavation, and acquisition and placement of backfill material in extraneous material excavation. *Rec.* at 24-25; *see* Pet. Exh. B, Tables 5-6.

### **Brickyard's Response to Agency's Recommendation**

On August 27, 2014, Brickyard filed a response (*Res.*) to the Agency's recommendation. Brickyard explained that, since the Agency's filing, Brickyard and the Agency met to discuss the Agency's recommendation. *Res.* at 1. In the response, Brickyard indicated that it did not seek to change the relief requested but instead addressed the Agency's concerns to provide clarity to Brickyard's original petition. *Id.* Brickyard suggested that the Agency would support the original petition for adjusted standard, after meeting with Brickyard and Brickyard having made the clarifications included in its response. *Id.* at 3.

Brickyard noted that the Agency agreed with Brickyard's analysis of the factors set out in Section 28.1 of the Act. *Res.* at 7; *see* 415 ILCS 5/28.1 (2012). Brickyard highlighted that the Agency agreed that environmental benefit will be realized by the implementation of the cover plan. *Res.* at 8. With regard to Section 814.402(b)(3) of the Board's landfill regulations, Brickyard noted that the Agency only took issue with Section 814.402(b)(3)(H) (the boundary line) and Section 814.402(b)(3)(I) (whether the boundary is 150 meters (approximately 492 feet) from the edge of the unit). *Res.* at 9; *see* 35 Ill. Adm. Code 814.402(b)(3)(H), (I).

Brickyard argued that, contrary to the Agency's recommendation, Brickyard was not seeking to expand the landfill in any way. *Res.* at 10. Brickyard asserted that the Petition was only an adjusted standard to move monitoring wells for Brickyard I. *Id.*, citing *Rec.* at 11. With regard to the actual location of the final groundwater monitoring wells, while it is "most certainly

the subject of IEPA permitting,” Brickyard agreed that the Board could benefit from more specificity. Therefore, Brickyard provided additional information on the location of monitoring wells. Res. at 11-12, 17-18.

Brickyard claimed that “the proposed compliance boundary is drawn to be within that maximum compliance boundary, at each and every location, using Computer Aided Design (“CAD”) technology, with the regulatory maximum distance set forth in Section 814.402(b)(I) (i.e., 150 meters from the edge of waste unit).” Res. at 14; *see* 35 Ill. Adm. Code 814.402(b)(I). Brickyard asserted that at no point did the proposed compliance boundary exceed the maximum 150-meter compliance boundary. Res. at 14.

Brickyard acknowledged that the Agency correctly observed that the proposed compliance boundary exceeds 100 feet at the southern end of the landfill. Res. at 15. While Brickyard explained the proposed compliance boundary was drawn to accommodate an existing, permitted GMZ on the southern edge of the landfill, Brickyard agreed to adjust the compliance boundary so that it remained less than 100 feet throughout the relevant area. *Id.* Brickyard reflected the change in a revised, proposed Board Order and exhibits. Res. at 16, Exh. A.

In response to the concern that Brickyard was requesting that the compliance boundary be extended, and a zone of attenuation established, even in areas where no extraneous material appeared to be present, Brickyard explained that the existing permitted groundwater monitoring network includes permitted wells in areas where no extraneous material exists yet those wells are not placed at the unit’s edge. Res. at 17. Brickyard expressed a desire to retain the existing wells as part of the permanent, routine monitoring network. *Id.* Brickyard explained that, while the proposed placement may not be consistent with the framework for an old Subpart D landfill, such as Brickyard I, the placement is consistent with the regulatory framework for a new Subtitle D landfill. Brickyard maintained that Subtitle D regulations are generally considered a more stringent set of regulations. *Id.*

Brickyard stated that, while the final well placement will be subject to the Agency’s permitting, Brickyard agreed that the Board would benefit from a more complete discussion of where Brickyard intends to seek well placement. Res. at 18. Therefore, Brickyard prepared an illustration that shows what Brickyard expects to occur in permitting if the Board grants the adjusted standard. Res. at 18, citing Res. Illustration 3. Brickyard stated that it will place a downgradient well as close to the relevant waste source as possible (unit boundary or fill area edge) and within the compliance boundary and zone of attenuation. Res. at 18. In the illustration, Brickyard indicated the wells in place that it would expect to retain as part of the routine monitoring network, noting that it would be subject to Agency permitting. *Id.* Finally, Brickyard agreed with the Agency that, if the compliance boundary is moved, impacts should be subject to relevant landfill regulations. *Id.*

### **September 18, 2014 Board Order**

On September 18, 2014, the Board issued an order directing Brickyard to file an amended petition addressing questions listed by the Board. Brickyard Disposal & Recycling, AS 14-3 (Sept. 18, 2014). Some of the questions echoed concerns expressed by the Agency in its

recommendation, while others were unrelated to that filing. *Id.* The Board's questions related to Brickyard's use of the term "water-bearing zone" rather than the term "aquifer" found in the Board's landfill regulations. *Id.* at 3; *See* 35 Ill. Adm. Code 814.402(b). The Board also directed Brickyard to provide additional explanation on the use of institutional controls proposed in the petition. *Id.* at 4-5. Finally, the Board directed Brickyard to explain how its "average annual high water mark" proposed in the petition is consistent with the requirements of Section 814.402(b)(3)(H) of the Board's landfill regulations. *Id.* at 5; 35 Ill. Adm. Code 814.402(b)(3)(H).

### **Brickyard's Amended Petition**

On November 6, 2014, Brickyard filed an Amended Petition (Am. Pet.). In response to the Board's Order, Brickyard first points out that the extraneous material is not intended to be incorporated into the landfill permit for Brickyard I. Am. Pet. at 2, fn. 2. Brickyard explains that for the purposes of monitoring the groundwater at Brickyard I, the term "water-bearing zone," referenced in the technical support document, is synonymous with the definition of "aquifer" contained in Section 3 of the Illinois Groundwater Protection Act and Section 810.103 of the Board's solid waste regulations. Am. Pet. at 7; 415 ILCS 55/3; 35 Ill. Adm. Code 810.103. Further, Brickyard states that the "water-bearing zone" described in the technical support document is consistent with the definition of "uppermost aquifer" at Section 810.103 of the Board's solid waste regulations. *Id.*; *see* 35 Ill. Adm. Code 810.103. Brickyard revised its site map depicting the contours that constitute the bottom of the uppermost aquifer and represents the vertical extent of the zone of attenuation. Am. Pet. at 10; Am. Pet. Exh. A, Figure 1. The revised site map also demonstrates the horizontal extent of the zone of attenuation. *Id.* at 11.

In its amended petition, Brickyard provides a response to the Board's request that Brickyard identify which institutional control Brickyard would use to ensure the cover system would stay in place over the extraneous materials. Brickyard explains that, pursuant to the cover plan, the cover overlying the extraneous materials will be maintained in a manner consistent with the final cover for Brickyard I. Brickyard describes this proposed cover as protective of the integrity of the final cover throughout the minimum 30-year post-closure care period. Am. Pet. at 12. Brickyard's amended petition adds a new condition to the proposed Board Order committing to maintain the cover consistent with the cover plan until the post-closure care for Brickyard I is concluded. Am. Pet. Exh. A. Further, Brickyard notes that as part of the certification of closure for Brickyard I, a deed notation will be included that the land has been used as a landfill facility and that its use is restricted pursuant to Section 811.111(d) of the Board's solid waste regulations. *Id.* at 13; *see* 35 Ill. Adm. Code 811.111(d). Brickyard's amended petition also adds a new condition to the proposed Board Order identifying the fill area containing extraneous materials on the deed that will be recorded upon completion of closure activities. Am. Pet. Exh. A.

Brickyard states that, pursuant to Section 811.319(a)(1) of the Board's solid waste regulations, the groundwater monitoring will continue for a minimum of 30 years after closure or as otherwise approved by the Agency. Am. Pet. at 15. Brickyard proposes a condition providing that any influence due to the extraneous materials that causes an exceedance of a relevant concentration will be addressed pursuant to Parts 811 or 814, as appropriate. Am. Pet. at 15;

Am. Pet. Exh. A; *see* 35 Ill. Adm. Code Part 811, 814. Brickyard maintains that it will assume all costs related to maintenance of the cover during the 30-year post-closure care period, noting that there will be no maintenance costs beyond post-closure care costs. Am. Pet. at 16.

Brickyard finally explains how the average annual high water mark provided in the petition is consistent with the requirements of 35 Ill. Adm. Code 814.402(b)(3) which does not use the word “average.” *See* 35 Ill. Adm. Code 814.402(b)(3). Brickyard first notes that a search of the Environmental Protection Act, the Groundwater Protection Act, the Board’s regulations, and the Board’s published opinions and orders suggest that the term “annual high water mark” has never been defined. Am. Pet. at 16. It argues that, since the annual high water mark varies from year to year, an averaging of continuous data over the course of several years would be appropriate and accomplish the presumed goal to ensure that monitoring is conducted in a manner to ensure public health and safety. *Id.* at 17.

In the amended petition, Brickyard uses the river elevation data to derive an “average annual high (maximum) elevation.” Am. Pet. at 17. Brickyard argues that “since the annual high water mark will vary from year to year, an average annual high (maximum) elevation was derived, which is believed to represent conservative (worst case) conditions.” *Id.* Using all available river elevation data dating back to 1960 from USGS Station 03339000, Brickyard first determined the maximum river elevations for each year for which data were available. Brickyard then averaged the maximum yearly values to determine the maximum average annual high water mark, which was found to be 519.14 feet above mean sea level (MSL). *Id.*, citing Pet. Exh. B at 27. Brickyard notes that the highest individual recorded river elevation was 534.66 feet above MSL occurring on April 13, 1994. Am. Pet. at 17-18. This elevation, Brickyard argues, “is within less than two feet of the 100-year flood elevation (533.40 [feet above] MSL), which by definition has a one percent probability of occurring annually.” *Id.* at 18. In contrast, asserts Brickyard, the annual high water mark “implies an occurrence of once a year or 100% probability of occurring annually.” *Id.* Further, Brickyard notes the lowest ground surface elevation along the proposed compliance boundary is 531.82 feet above MSL, which is well above the average annual high water mark elevation and close to the 100-year flood plain elevation. Am. Pet. Attach. B at 8.

Accordingly, Brickyard argues that, “on the basis of the available annual high river elevation data (high water mark) averaged over more than five decades, the proposed compliance boundary does not extend beyond the “annual high water mark.” Am. Pet. at 17-18; Am. Pet. Attach. B. Brickyard maintains that it has, therefore, demonstrated that the annual high water mark, however defined, will not encroach on the proposed compliance boundary in a manner that will adversely impact health and safety or drinking water sources. *Id.*

### **Agency’s Amended Recommendation**

On November 18, 2014, the Agency filed an Amended Recommendation (Am. Rec.) recommending that the Board grant Brickyard’s amended petition. The Agency noted that it had not received a citizen inquiry regarding Brickyard’s petition. Am. Rec. at 3. The Agency determined that Brickyard’s response “provided significant clarification to the issues which the Agency noted within its Recommendation” and that the “only notable remaining issues would be

two fold, first the measurement of the 150 meter limit from the unit as well as whether the Board seeks exact locations of the wells.” *Id.* The Agency further determined that the Amended Petition adequately addressed the issues raised by the Board’s September 18, 2014 order. *Id.* Accordingly, the Agency recommended that the Board grant Brickyard’s Amended Petition. *Id.*

### **APPLICABLE RULES**

35 Ill. Adm. Code 810.103 of the Board regulations define “Zone of attenuation”:

“Zone of attenuation” means the three dimensional region formed by excluding the volume occupied by the waste placement from the smaller of the volumes resulting from vertical planes drawn to the bottom of the uppermost aquifer at the property boundary or 100 feet from the edge of one or more adjacent units. 35 Ill. Adm. Code 810.103.

Section 814.402 of the Board’s landfill regulations provides the applicable standards for existing Subpart D landfills. Specifically, Section 814.402(b)(3) of the Board’s landfill regulations provides the analysis the Board shall use in considering an adjusted standard to adjust a compliance boundary, stating:

3) Groundwater Standards

A unit shall not contaminate a source of drinking water at the compliance boundary, defined as any point on the edge of the unit at or below the ground surface. At any point on the compliance boundary, the concentration of constituents shall not exceed the water quality standards specified in 35 Ill. Adm. Code 302.301, 302.303, 302.304, and 302.305. The Board may provide for a zone of attenuation and adjust the compliance boundary in accordance with Section 28.1 of the Act and the procedures of 35 Ill. Adm. Code 106.Subpart G upon petition demonstration by the owner or operator that the alternative compliance boundary will not result in contamination of groundwater which may be needed or used for human consumption. In reviewing such petitions, the Board will consider the following factors:

- A) The hydrogeological characteristics of the unit and surrounding land, including any natural attenuation and dilution characteristics of the aquifer;
- B) The volume and physical and chemical characteristics of the leachate;
- C) The quantity, quality, and direction of flow of groundwater underlying the facility;
- D) The proximity and withdrawal rates of groundwater users;

- E) The availability of alternative drinking water supplies;
- F) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater;
- G) Public health, safety, and welfare effects; and
- H) In no case shall the zone of compliance extend beyond the facility property line or beyond the annual high water mark of any navigable surface water.
- I) Notwithstanding the limitations of subsection 814.402(b)(3)(H), in no case shall the zone of compliance at an existing MSWLF unit extend beyond 150 meters from the edge of the unit. 35 Ill. Adm. Code 814.402(b)(3).

Section 811.318(b)(3) of the Board's solid waste regulations provides for the location of monitoring points, and states:

- 3) Monitoring wells shall be established as close to the potential source of discharge as possible without interfering with the waste disposal operations, and within half the distance from the edge of the potential source of discharge to the edge of the zone of attenuation downgradient, with respect to groundwater flow, from the source. 35 Ill. Adm. Code 811.318(b)(3).

Section 811.320(c) of the Board's solid waste regulations provides the requirements for the determination of the zone of attenuation:

- c) Determination of the Zone of Attenuation
  - 1) The zone of attenuation, within which concentrations of constituents in leachate discharged from the unit may exceed the applicable groundwater quality standard of this Section, is a volume bounded by a vertical plane at the property boundary or 100 feet from the edge of the unit, whichever is less, extending from the ground surface to the bottom of the uppermost aquifer and excluding the volume occupied by the waste.
  - 2) Zones of attenuation shall not extend to the annual high water mark of navigable surface waters.
  - 3) Overlapping zones of attenuation from units within a single facility may be combined into a single zone for the purposes of establishing a monitoring network. 35 Ill. Adm. Code 811.320(c).

## LEGAL FRAMEWORK FOR ADJUSTED STANDARD

The Act and the Board's procedural rules provide that a petitioner may request, and the Board may grant, an adjusted standard that is different from the generally applicable standard that would otherwise apply to the petitioner. See 415 ILCS 5/28.1 (2012); 35 Ill. Adm. Code 104.Subpart D.

After adopting a regulation of general applicability, the Board may grant, in a subsequent adjudicatory determination, an adjusted standard for persons who can justify such an adjustment consistent with subsection (a) of Section 27 of this Act. In granting such adjusted standards, the Board may impose such conditions as may be necessary to accomplish the purposes of this Act. The rule-making provisions of the Illinois Administrative Procedure Act and Title VII of this Act shall not apply to such subsequent determinations. 415 ILCS 5/28.1(a) (2012).

The general procedures that govern an adjusted standard proceeding are found at Section 28.1 of the Act and Section 104.Subpart D of the Board's procedural rules. 415 ILCS 5/28.1 (2012); 35 Ill. Adm. Code 104.400 et seq. Section 28.1(c) of the Act provides

- (c) If a regulations of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by petitioner, that:
  - (1) factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to the petitioner;
  - (2) the existence of those factors justifies an adjusted standard;
  - (3) the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and
  - (4) the adjusted standard is consistent with any applicable federal law. 415 ILCS 5/28.1 (2012).

Section 104.406 of the Board's procedural rules specify the required contents for the adjusted standard petition. See 35 Ill. Adm. Code 104.406, 104.416. After a petition for an adjusted standard is filed, the Agency must file its recommendation with the Board within 45 days after the filing of the petition or amended petition, or at least 30 days before any scheduled hearing, whichever is earlier. 35 Ill. Adm. Code 104.416. The adjusted standard proceeding is adjudicatory in nature and therefore is not subject to the rulemaking provisions of the Illinois Administrative Procedure Act (5 ILCS 100/1-1 *et seq.* (2012)). See 415 ILCS 5/28.1(a) (2012); 35 Ill. Adm. Code 101.202 (defining "adjudicatory proceeding").

The burden of proof in an adjusted standard proceeding is on the petitioner. 415 ILCS 5/28.1(b), (c) (2012); 35 Ill. Adm. Code 104.426. Once granted, the adjusted standard, instead of the rule of general applicability, applies to the petitioner. 415 ILCS 5/28.1(a) (2012); 35 Ill. Adm. Code 101.202, 104.400(a).

### **STANDARD OF DECISION**

The Board has authority to grant an adjusted standard, pursuant to Section 28.1 of the Act, for persons who can justify an adjustment in one of two ways. 415 ILCS 5/28.1 (2012). If the Board has specified the level of justification for an adjusted standard in the rule of general applicability, then that level of justification shall apply. 415 ILCS 5/28.1(b) (2012). However, if a rule of general applicability does not provide a level of justification, the Board will use the factors set out in Section 28.1 of the Act in granting an adjusted standard. 415 ILCS 5/28.1(c) (2012).

As discussed above, Brickyard requests that the Board move the location of the compliance boundary pursuant to Section 814.402(b)(3) of the Board's landfill regulations and adjust the groundwater compliance provisions of Sections 810.103, 811.318(b)(3), and 811.320(c) of the Board's solid waste regulations. 35 Ill. Adm. Code 810.103, 811.318(b)(3), 811.320(c), 814.402(b)(3). Section 814.101(a) of the Board's landfill regulations dictates that Part 814 standards are applicable to all existing landfill facilities, which includes facilities that are not considered to be new as defined in Section 810.103 of the Board's solid waste regulations. 35 Ill. Adm. Code 814.101(a), 810.103. The level of justification for adjusting the compliance boundary is specifically provided for in Section 814.402(b)(3) of the Board's landfill regulations. Therefore, pursuant to Section 28.1 of the Act, the Board's discussion on adjusting the compliance boundary will follow that section. 415 ILCS 28.1(a); 35 Ill. Adm. Code 814.402(b)(3).

Regarding Brickyard's request for an adjusted standard from the groundwater monitoring requirements of Sections 810.103, 811.318(b)(3), and 311.320(c) of the Board's solid waste regulations, the factors set forth in Section 28.1 of the Act must be considered to justify the requested relief because the rule of general applicability does not provide a level of justification. 415 ILCS 5/28.1(c) (2012); *see supra* at 13.

### **DISCUSSION**

For Part 814 Subpart D landfills, the compliance boundary where groundwater standards must be met is defined as "any point on the edge of the unit at or below the ground surface." 35 Ill. Adm. Code 814.402(b)(3). For landfills that meet the more stringent Board regulations and remain open beyond 1997, the compliance boundary is at the outer edge of a "zone of attenuation," which would normally be a 3-dimensional region, excluding the landfill volume itself, that extends 100 feet from the edge of the unit or up to the property boundary, whichever is less, down to the bottom of the uppermost aquifer. 35 Ill. Adm. Code 810.103.

Brickyard suggests that compliance with the rule of general applicability would require Brickyard to monitor groundwater in the fill area. Brickyard states that this would not provide monitoring results indicative of the landfill's impact on groundwater. Pet. at 21. Brickyard explains that removing the extraneous material may jeopardize the stability of the landfill and liner. *Id.* at 21-22. Therefore, in the amended petition, Brickyard seeks an adjusted compliance boundary along with a zone of attenuation. Specifically, Brickyard proposes monitoring wells be placed outside the fill area to better ascertain the impact of the landfill and the extraneous materials on the groundwater while maintaining the integrity of the landfill unit. *Id.*

Section 814.402(b)(3) of the Board's landfill regulations provides for an adjusted standard process for Part 814, Subpart D landfills where the Board can establish a zone of attenuation and compliance boundary up to 150 meters (about 492 feet) from the edge of the unit rather than at the edge of the unit. *See* 35 Ill. Adm. Code 814.402(b)(3). Therefore, Brickyard requests that the Board provide a zone of attenuation that extends beyond 100 feet, but within 150 meters (about 492 feet) from the edge of the unit. In order to accommodate the adjusted compliance boundary, Brickyard appropriately seeks relief from the definition of zone of attenuation, as well as the provision for determining the zone of attenuation. *See* 35 Ill. Adm. Code 810.103, 811.320(c). Brickyard also seeks relief from Section 811.318(b)(3) of the Board's solid waste regulations (35 Ill. Adm. Code 811.318(c)), which requires the placement of monitoring wells at the edge of the unit, and within half the distance from the edge of the unit to the edge of the zone of attenuation.

The Board must determine whether Brickyard has provided sufficient support in the record for the Board to grant the adjusted standard as requested. For the Board to grant the adjusted standard, Brickyard must meet the requirements set out in Section 28.1(c) of the Act and Part 104 of the Board's procedural regulations. 415 ILCS 5/28.1(c) (2012); 35 Ill. Adm. Code 104. Those factors apply to the relief requested from the definition of the zone of attenuation (35 Ill. Adm. Code 810.103), the location of groundwater monitoring wells (35 Ill. Adm. Code 811.318(b)(3)), and the determination of zone of attenuation (35 Ill. Adm. Code 811.320(c)).

Unlike the previously mentioned regulatory provisions, Section 814.402(b)(3) of the Board's landfill regulations is a regulation of general applicability and specifies a level of justification necessary for the Board to grant an "alternative compliance boundary." 35 Ill. Adm. Code 814.402(b)(3). Therefore, the Board will analyze Brickyard's requested relief from Section 814.402(b)(3) under that, more specific, standard. The Board first determines whether the petition for relief from Sections 810.103, 811.318(b)(3) and 811.320(c) meets the Section 28.1(c) factors before addressing the specific considerations laid out in Section 814.402(b)(3).

As explained above, the Board must consider the Section 28.1(c) factors with regard to the requested relief from the definition of the zone of attenuation, location of groundwater monitoring wells, and the determination of the zone of attenuation. The Board considers each factor in turn, below.

**Section 28.1(c)(1): Substantially Different**

First, the Board must determine whether the factors relating to Brickyard are substantially and significantly different from the factors relied upon by the Board in adopting Sections 810.103, 811.320(c), and 811.318(b)(3) of the Board's solid waste regulations. *See* 35 Ill. Adm. Code 810.103, 811.320(c), 811.318(b)(3). Section 811.318(b)(3) requires that monitoring wells be placed as close to the potential source of discharge as possible and within half the distance from the edge of the unit to the edge of the zone of attenuation. The definition of the zone of attenuation (35 Ill. Adm. Code 810.103(d)) as well as the determination of the zone of attenuation (35 Ill. Adm. Code 811.320(c)) limit the horizontal extent of the zone of attenuation to 100 feet from the edge of the unit. *Pet.* at 5-6. As explained above, in some instances at Brickyard, the zone of attenuation would terminate in the fill area. *Id.* Thus, placing the groundwater monitoring wells pursuant to Section 811.318(b)(3) of the Board's solid waste regulations (35 Ill. Adm. Code 811.318(b)(3)) would either require that the extraneous material be removed or that the wells be placed directly into the extraneous material. Brickyard argues that the factors relating to Brickyard are substantially and significantly different from the factors relied upon by the Board in adopting Sections 810.103, 811.320(c), and 811.318(b)(3) given the "historic nature and technical challenges relative to the fill area outside the defined perimeters of Brickyard I." *Pet.* at 5.

The landfill standards at issue in this proceeding were adopted by the Board as a part of the standards for new solid waste landfills. *See Development, Operating, and Reporting Requirements for Non-Hazardous Waste Landfills*, R88-7, (Aug. 17, 1990). These regulations generally require new landfill units, lateral expansions, and existing units remaining open beyond August 17, 1997 to comply with the applicable groundwater standards at the edge of the zone of attenuation as defined at Section 810.103 and determined in accordance with Section 811.320(c) of the Board's solid waste regulations. 35 Ill. Adm. Code 810.103, 811.320(c). Further, Section 811.318(b)(3) of those regulations requires the subject landfills to be monitored by placing monitoring wells as close to the potential source of discharge as possible, and within half the distance from the edge of the unit to the edge of the zone of attenuation. 35 Ill. Adm. Code 811.318(b)(3).

As noted above, the zone of attenuation and monitoring well requirements are primarily intended to apply to new landfill units, lateral expansions, and existing units remaining open beyond August 17, 1997. *See* 35 Ill. Adm. Code 811.101, 814.302. These landfill units are required to meet most of the location, design, operation, closure and post-closure standards found in Part 811 of the Board's solid waste regulations. *Id.* Further, the regulations recognize the possibility of an existing landfill closing within seven years of the effective date of the landfill regulations needing an adjusted compliance boundary along with a zone of attenuation and allowed for such provisions pursuant to Section 814.402(b)(3) of the Board's landfill regulations. 35 Ill. Adm. Code 814.402(b)(3). However, as noted by Brickyard, in adopting the landfill regulations, the Board did not contemplate the presence of extraneous materials outside the waste foot print but contiguous to the landfill unit that would interfere with the designation of a zone of attenuation and compliance monitoring of the landfill unit. *Pet.* at 6-7.

The Board agrees with Brickyard's assertion that the extraneous material in the fill area and its structural properties put Brickyard in a unique regulatory circumstance, substantially different from those considered by the Board in adopting the rules of general applicability. During the landfill's operation, railroad ties and other construction debris were deposited in an area contiguous to the landfill, but outside the permitted area. Pet. at 2. These extraneous materials now provide stability and support for Brickyard I. Pet. at 2. The Board further agrees that it did not envision such a circumstance when adopting Parts 810 and 811 of the Board's solid waste regulations.

The Board has previously granted relief to authorize moving monitoring wells beyond the edge of the landfill waste area. In the Johns Manville case, for example, the Petitioner requested relief from: specific landfill closure requirements for monitoring groundwater and gas at an on-site landfill; the frequency of landfill gas monitoring from a monthly period to semi-annual for a total of five years; and the location requirements for monitoring wells for groundwater and monitoring for gas that were required 100 feet from the edge of the waste. Petition of Johns Manville for an Adjusted Standard From 35 Ill. Adm. Code Part 814, 811.310, 811.311, 811.318, AS 04-4 (Dec. 6, 2007). With regard to the monitoring wells, the petitioner in Johns Manville maintained that the groundwater monitoring at the locations required in the rules of general applicability would require either placement of the wells on the steeply sloping sides of the landfill or through the engineered cover placed for closure of the landfill. *Id.* at 11. Such placement would have resulted in the wells being placed through the underlying waste materials before actually entering the underlying groundwater-bearing zone. *Id.*

In granting the requested relief, the Board noted:

The Board rules pertaining to location of monitoring wells at Section 311.318(b)(3) are intended to be part of the early warning groundwater monitoring requirements for chemical and putrescible waste landfills. *See* 35 Ill. Adm. Code 811.318(c), 811.319(a)(4)(A)(ii). The zone of attenuation requirement at Section 811.320(c)(1) is intended "to provide a buffer area between the source of the discharge and the point at which the applicable groundwater standards are enforced." *See Development, Operating And Reporting Requirements For Non-Hazardous Waste Landfills*, R88-7 (Aug. 17, 1990) at Exh. 1 pg. 76. While the groundwater monitoring well location provisions at issue are intended for addressing groundwater contamination issues in a timely manner, the landfill rules did not contemplate drilling wells through closed CERCLA landfills. Johns Manville, AS 04-4, slip op. at 17 (Dec. 6, 2007).

Here, like in Johns Manville, the Board finds that the Board's Part 810 and 811 solid waste regulations did not contemplate drilling groundwater monitoring wells through structurally significant extraneous materials. Thus, the Board finds that Brickyard's requested relief from Sections 810.103, 811.318(b)(3), and 811.320(c) of the Board's solid waste regulations meets the requirements of Section 28.1(c)(1) of the Act. 415 ILCS 5/28.1(c)(1) (2012).

**Section 28.1(c)(2): Those Factors Justify an Adjusted Standard**

The Board must next determine whether the factors that make Brickyard substantially different from those considered by the Board in adopting its solid waste regulations justify an adjusted standard. *See* 415 ILCS 5/28.1(c)(2) (2012). To comply with the regulations promulgated by the Board, Brickyard must either remove the extraneous materials or place monitoring wells directly through the extraneous materials. Pet. at 5. Brickyard contends that the adjusted standard would allow it to monitor outside the area, so that the potential impacts from either the permitted landfill unit or the contiguous fill area are considered, understood, and, if necessary, remediated. Pet. at 7. Further, Brickyard asserts that the “historic fill area provides support . . . for the existing landfill such that the fill area . . . provides a partial but essential framework for the existing landfill.” *Id.* Brickyard estimates the cost of removal of extraneous material from the fill area to cost approximately \$47,285,326. Pet. Exh. B at 26. For these reasons, Brickyard argues that removal of the extraneous material is not an environmentally sound or economically viable option.

The Board agrees that removing the extraneous materials could compromise the stability of the landfill and could potentially result in additional contamination. Further, placing the monitoring wells in extraneous materials could potentially miss contamination coming from the extraneous materials. The Board finds that placing some of the groundwater monitoring wells outside of the fill area would allow the facility to monitor potential impacts from both the permitted landfill unit and the fill area and adequately remediate if necessary. Pet. at 7. Notably, Brickyard is not seeking to expand the landfill. Res. at 10. The Board finds that allowing the monitoring wells to be moved outside the boundary to capture any potential contamination serves the same goal as intended in the promulgation of the rule for groundwater monitoring at landfills. Therefore, the Board finds that the existence of the substantially and significantly different factors faced by Brickyard justifies the adjusted standard.

**Section 28.1(c)(3): Environmental Impact**

Pursuant to Section 28.1(c)(3) of the Act, the Board must next determine that 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. 415 ILCS 5/28.1(c)(3) (2012). The Board finds that allowing Brickyard to move the monitoring wells outside of the fill area allows Brickyard to monitor impacts not only from the permitted landfill, but also from extraneous material in the fill area.

In order to better assess the environmental impact of the requested adjusted standard, the Board references the four objectives that the Board considered when defining the zone of attenuation in the Board’s solid waste regulations. Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills, R88-7, Appendix A1 at 75 (Aug. 17, 1990). In that rulemaking, the Board stated that:

[a]ll contaminants must be attenuated by the time the groundwater reaches the edge of the zone of attenuation. This distance [zone] is intended to accomplish several objectives:

1. Establish monitoring points as close to the unit as possible;
2. Keep the volume of geologic material that must be evaluated during a groundwater impact assessment to a minimum;
3. Keep any potential contaminated area to an absolute minimum; and
4. Establish an enforceable boundary at which an excursion (a significant increase in the concentration of any contaminant, attributable to the unit, and more than the allowable maximum concentration at that point) during the operating period is likely to be discovered before the end of the postclosure care period. *Id.*

Brickyard argues that placing the monitoring wells just beyond the fill areas is the closest that the monitoring wells can be placed while avoiding the extraneous materials. Pet. at 11. The Board agrees that placement of the monitoring wells in the extraneous materials or removal of the extraneous material would compromise the ability of the monitoring wells to detect contaminants from both the landfill unit and the fill area. Therefore, placing the wells just outside of the fill area reasonably meets the first objective under the unique circumstances at Brickyard.

The second objective is not applicable to Brickyard I pursuant to Section 814.402(a), and is therefore not a relevant objective for consideration here. *Id.* at 11.

As stated above, moving the wells outside of the extraneous material will allow the wells to capture any potential contamination that is coming not only from the regulated landfill but also the extraneous materials that fall outside of the property line. The Board agrees that the proposed adjusted compliance boundary, which requires placing the wells outside of the fill area, will keep any potential contaminated area to a minimum. Therefore, the requested relief meets the third objective.

Finally, the Board finds that the requested relief is consistent with the fourth objective since placement of wells beyond the fill area will help establish a boundary capable of discovering any significant increase in the concentration of contaminants, attributable to the unit or extraneous material and allow Brickyard to remediate it if necessary.

The Board therefore believes the adjusted standard, as requested in Brickyard's amended petition, would fulfill the objectives for a zone of attenuation established in Docket R88-7 and 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. *See generally Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills*, R88-7 (Aug. 17, 1990).

**Section 28.1(c)(4) Consistency with any applicable federal law**

Finally, the Board finds that the requested relief is consistent with federal law. The relevant federal law is found at Section 258.40(d) of Title 40 of the Code of Federal Regulations. 40 CFR 258.40(d). That regulation provides:

The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of Compliance State Director shall consider at least the following factors:

- (1) The hydrogeologic characteristics of the facility and surrounding land;
- (2) The volume and physical and chemical characteristics of the leachate;
- (3) The quantity, quality, and direction, of flow of ground water;
- (4) The proximity and withdrawal rate of the ground-water users;
- (5) The availability of alternative drinking water supplies;
- (6) The existing quality of the ground water, including other sources of contamination and their cumulative impacts on the ground water, and whether the ground water is currently used or reasonably expected to be used for drinking water;
- (7) Public health, safety, and welfare effects; and
- (8) Practicable capability of the owner or operator. 40 C.F.R. 258.40(d).

The relevant federal requirement would allow the point of compliance to be determined by the state so long as it was no more than 150 meters (about 492 feet) from the waste unit boundary and met the factors listed above. The requested relief falls within the 150 meter (about 492 feet) requirement set by federal requirements and the factors listed are captured under Section 814.402(b)(3) of the Board Regulations addressed in detail below. *See* 35 Ill. Adm. Code 814.402(b)(3). Therefore, the Board finds that the requested relief is consistent with federal Law.

**35 Illinois Administrative Code 104.406 Petition Contents**

In the Board's September 18, 2014 order, the Board determined that Brickyard met all of 35 Ill. Adm. Code 104.406 petition content requirements except for some clarifications the Board directed Brickyard to address in an amended petition. The Board will here address only those outstanding clarifications before granting the adjusted standard.

**Hydrogeologic Characteristics**

In the September 18, 2014 order, the Board sought clarification as to the geologic unit that constituted the uppermost aquifer and also directed Brickyard to delineate the horizontal and vertical extent of the proposed zone of attenuation. Brickyard clarified that "water bearing zone," as identified in Brickyard's technical support document, is synonymous with the definition of "aquifer" in Section 810.103 of the Board's solid waste regulations. Am. Pet at 7;

35 Ill. Adm. Code 810.103. Further, Brickyard noted that the “water bearing zone” is consistent with the definition of “uppermost aquifer” in Section 810.103 of the Board’s solid waste regulations. *Id.* Brickyard states that the bottom of the uppermost aquifer is the top of the shale located under Brickyard I and the extraneous materials. *Id.* at 9 citing Pet. Exh. B at 7. Brickyard continues that middle shale is largely present beneath the fill area, but transitions to sandy siltstone to the east of the unit. Brickyard used middle shale and sandy siltstone elevations obtained from mine maps, boring investigations, and monitoring well installations to create an approximate topographic surface of the bottom of the uppermost aquifer—the bottom of the zone of attenuation. *Id.* at 11. Finally, Brickyard submitted a revised Petition Figure 1 delineating the horizontal and vertical extent of the proposed zone of attenuation relying on the contours of the bottom of the uppermost aquifer and the lateral compliance boundary. *See* Am. Pet. Exh. A. The Board finds that the clarifications and additional information provided by Brickyard adequately address the concerns raised in the September 18, 2014 Board Order regarding the hydrogeologic characteristics.

### **Institutional Controls**

The Board asked Brickyard to provide information on the proposed institutional controls concerning both cover over extraneous materials and groundwater monitoring. Petition of Brickyard Disposal & Recycling, AS 14-3, slip op. at 4-5 (Sept. 18, 2014). Brickyard was also directed to address the long-term maintenance of the proposed institutional controls. *Id.* Brickyard clarified that it used the term ‘institutional control’, “in its pre-Part 742 context—to describe a type of legally recognized constraint applicable to a particular facility; Petitioner did not intend to link this constraint with the Part 742 rules which, as the Board knows, are applicable to remedial action projects, which this is not.” Am. Pet. at 11-12. Brickyard states that its intention was to “identify requirements that will be subject to Order of the Board via this Adjusted Standard, which are not existing legal obligations contained in statute or Board regulations.” *Id.* at 12.

In response, Brickyard proposes additional conditions (proposed conditions 8 and 9) to the proposed adjusted standard that require: maintenance of the cover over extraneous materials until the conclusion of the post-closure care (proposed condition 8); and identification of the area containing extraneous materials on the deed which will be recorded in accordance with Section 811.110(g) upon completion of closure activities (proposed condition 9). Am. Pet. at 13-14. Regarding groundwater monitoring, Brickyard states that monitoring of the landfill and fill area will continue for a minimum period of 30 years after closure or otherwise approved by the Agency pursuant to Section 811.319(a)(1). *Id.* at 14; 35 Ill. Adm. Code 811.319(a)(1).

The Board notes that the proposed time period for post-closure maintenance of the cover over extraneous materials and groundwater monitoring is consistent with the landfill post-closure care provisions under Part 811 of the Board’s solid waste regulations. *See* 35 Ill. Adm. Code 811. Further, requiring Brickyard to include the area containing extraneous materials on the deed ensures that any future purchaser of the landfill property will have notice of its prior use as a landfill, including the fill area. As such, the Board finds that Brickyard has adequately addressed concerns regarding post-closure maintenance of cover over extraneous materials and groundwater monitoring.

### **Annual High Water Mark**

The Board asked Brickyard to clarify how the “average annual high water mark” as proposed in the petition is consistent with the requirements of 35 Ill. Adm. Code 814.402(b)(3)(H). That section of the Board’s landfill regulations demands that “[i]n no case shall the zone of compliance extend beyond the facility property line or beyond the *annual high water mark* of any navigable surface water.” 35 Ill. Adm. Code 814.402(b)(3)(H) (emphasis added). Brickyard notes that the Vermilion River is the navigable surface water located adjacent to Brickyard I. Pet. Exh. B at 27. Brickyard relied upon data dating back to 1960 from the United States Geological Survey (USGS) gauging station (No. 03339000) located directly east of the landfill to determine an average annual high water mark. *Id.*

As an initial matter, Brickyard notes that the term “annual high water mark” has not been defined in the Act, the Illinois Groundwater Protection Act (IGPA), the Board rules or the Board’s published opinion and orders. Brickyard asserts that annual high water mark is vague and does not fit the typical terminology for the study of hydrology. Am. Pet. at 16. Therefore, Brickyard contends, “averaging of continuous data over the course of several years would be appropriate and still accomplish the presumed goal of this provision: to ensure that monitoring is conducted in a manner to ensure public health and safety.” *Id.* at 17. Brickyard continues, “[s]ince the ‘annual high water mark’ will vary from year to year, an average annual high (maximum) elevation was derived, which is believed to represent conservative (worst case) conditions.” *Id.* Brickyard determined the annual high water mark to be 519.14 feet above MSL based on averaging the highest water elevations occurring annually in the river since 1960. Brickyard noted that the highest individual river elevation, over the period since 1960, was 534.66 feet above MSL. *Id.* at 17-18. Since the lowest ground surface elevation along the proposed compliance boundary, which occurs between wells T114 and T115, is 531.82 feet above MSL (Pet. Exh. B, Attach. 9, Fig. 9-3), Brickyard asserts that the compliance boundary does not extend beyond the annual high water mark calculated by averaging annual high river elevation data. *Id.* at 18. In addition, the Board reviewed the stream gauge (river elevation) data submitted by Brickyard. Pet. Exh. B, Attach. 8. The Board’s review found that the elevation of the Vermilion River near Brickyard I exceeded 531.82 feet above MSL only once on April 13, 1994 when the river elevation was measured at 534.66 feet above MSL. *Id.*

The Board agrees with Brickyard that the term “annual high water mark” is not defined in the Board regulations, the Act, or IGPA. However, federal regulations and guidance documents offer insight on the term “high water mark.” For example, Section 329.11(a)(1) of Title 33 of the Code of Federal Regulations defines “‘ordinary high water mark’ on non-tidal rivers” as

the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. 33 C.F.R. 329.11(a)(1); *see also* 33 C.F.R. 328.3(e).

The Board finds this federal definition useful in determining the annual high water mark for purposes of Section 814.402(b)(3)(H) of the Board's landfill regulations. 35 Ill. Adm. Code 814.402(b)(3)(H).

Based on the river elevation data, the Board finds that the annual high water mark must be less than 531.82 feet above MSL—a river elevation exceeded by the Vermilion River only once since 1960. Because 531.82 feet is the lowest ground surface elevation along the proposed compliance boundary, the compliance boundary and zone of attenuation will not extend beyond Brickyard's average annual high water mark of 519.14 feet above MSL.

Further, the Board adds a condition to the adjusted standard that requires Brickyard to ensure that the compliance boundary and zone of attenuation will not extend beyond the annual high water mark of the Vermilion River at any location. This condition, the Board notes, is similar to one included in an adjusted standard granted to Commonwealth Edison Company in Petition of Commonwealth Edison Company for an Adjusted Standard From 35 Ill. Adm. Code Parts 811 And 814, AS 96-9, slip op. at 22 (Aug. 15, 1996). Thus, the Board finds that the Vermilion River elevation data supplied by Brickyard along with the Board condition satisfies Section 814.402(b)(3)(H) of the Board's landfill regulations.

**Section 814.402(b)(3): Alternative Compliance Boundary and Zone of Attenuation Determination for Subpart B Landfills**

**Section 814.402(b)(3)(A): The hydrogeological characteristics of the unit and surrounding land, including any natural attenuation and dilution characteristics of the aquifer**

The Board next turns to its review of whether Brickyard met the requirements under Section 814.402(b)(3) of the Board's landfill regulations to allow for an adjustment of the zone of attenuation and the compliance boundary. Brickyard contends that the hydrological characteristics of the unit and the surrounding land do not pose an environmental risk if the adjusted standard is granted. Instead, the adjusted standard will allow for more appropriate monitoring of actual conditions. Pet. at 27. Brickyard has provided the Board with detailed site hydrogeologic information to support its assertions. Pet. Exh. B at 6-9.

The hydrological characteristics of Brickyard I and the surrounding area are influenced by historic coal mining activities around Brickyard I that impact the groundwater quality and potentiometric surface characteristics of the Brickyard I area. Pet. at 27. There are six types of deposits generally present in the area that are classified as upper clay, glacial sand, lower silty clay, upper shale, coal and underclay, and middle shale. *Id.* Brickyard I is mostly located on the glacial silty clay deposit overlying the upper shale. *Id.* The Brickyard I migration pathway is in the coal seam, the mine void where the coal has been removed by underground mining. *Id.* This coal seam pathway is continuous beneath Brickyard I, with overall groundwater movement from west to east. *Id.* Due to mechanical disturbance of the bedrock surface of Brickyard I, the groundwater movement east of Brickyard I can vary. *Id.*; Pet. Exh. B at 6.

Brickyard identified the uppermost aquifer, which is the most probable contaminant migration pathway as the geologic formations on top of the middle shale and sandy siltstone

(from west to east of the landfill area). Am. Pet. at 9-10; 35 Ill. Adm. Code 811.318(b)(2). The groundwater monitoring network is designed on the basis of groundwater movement within the aquifer and to provide early detection of a change in groundwater quality due to influences from Brickyard I or the fill area. Am. Pet. at 10. Therefore, the Board finds that because of these hydrogeological characteristics, the land surrounding Brickyard and Brickyard itself do not pose an additional environmental threat if the boundary is adjusted as requested.

**Section 814.402(b)(3)(B): The volume and characteristics of the leachate**

The leachate associated with Brickyard I is generated primarily by precipitation infiltration through the cover system. Pet. at 28. Approximately 18,850,000 gallons of leachate is present within Brickyard I, and that leachate is considered “potentially mobile.” *Id.*; Pet. Exh. B at 9. However, due to the sidewall liners and final cover, liquid mobilization is restricted. Pet. at 28. Still, Brickyard explains that there may be groundwater infiltration from saturated deposits coincident with the sidewall liner west of Brickyard I. *Id.*

According to Brickyard, leachate from Brickyard I is extracted from three manholes and conveyed to a treatment facility owned by the City of Danville. Pet. Exh. B at 9. Brickyard contends that the leachate concentrations for Brickyard I are significantly less than the “average concentrations expected for a municipal solid waste disposal facility.” Pet. at 28. Brickyard explains that two of the indicator parameters, chloride and sulfate, are relatively low for a former mining area. *Id.* Boron is also prevalent in the groundwater, but is present in similar concentrations in upgradient and downgradient groundwater monitoring wells. *Id.* No current inorganic parameter concentrations indicate a leachate release. *Id.*

The Board finds that the volume, along with the physical and chemical characteristics of the leachate, does not pose an environmental risk if the boundary is adjusted as requested. The Board finds that the placement of final cover and maintenance of leachate extraction also support a conclusion that Brickyard has met Section 814.402(b)(3)(B) of the Board’s landfill regulations.

**Section 814.402(b)(3)(C): The quantity, quality, and direction of flow of groundwater underlying the facility**

Brickyard estimates that the approximate gross volume of groundwater present below Brickyard I is 45,619,200 gallons. Pet. at 29; Pet. Exh. B at 12. The quality of groundwater is classified as Class IV (“Other Groundwater”) groundwater pursuant to Section 620.240(g) of the Board’s groundwater quality regulations. Pet. at 29; *See* 35 Ill. Adm. Code 620.240(g). That section of the Board’s groundwater quality regulations states that “other groundwater” is “[g]roundwater within a previously mined area, unless monitoring demonstrates that the groundwater is capable of consistently meeting the standards of Section 620.410 or 620.420. If such capability is determined, groundwater within the previously mined area shall not be Class IV.” 35 Ill. Adm. Code 620.240(g). Brickyard contends that the mining activities around Brickyard I prohibit the groundwater from meeting Class I and II quality standards. Pet. at 29; Pet. Exh. B at 13.

The movement of the groundwater generally occurs from west to east towards the bedrock trough located east of Brickyard I. Due to mechanical disturbance of the bedrock surface east of Brickyard I, the groundwater movement east of Brickyard I varies. Pet. at 29; Pet. Exh. B at 7, 13. However, Brickyard notes that the bedrock trough serves as a drainage structure as well as a groundwater divide. This trough intercepts groundwater moving west to east beneath the site (as well as east to west from an area west of the Vermilion River) and conveys groundwater towards the northeast corner of Brickyard I. The bedrock trough dissipates as it nears the city of Danville's wastewater treatment plant. Pet. Exh. B at 8.

The Board finds that the quantity, quality, and direction of flow of groundwater underlying the facility does not pose an additional threat of contamination to groundwater potentially needed or used for human consumption if the compliance boundary is adjusted as requested.

**Section 814.402(b)(3)(D): The proximity and withdrawal rates of groundwater users**

There are no groundwater users or receptors located downgradient from Brickyard I. Pet. at 30; Pet. Exh. B at 14-15. Brickyard contends that the adjusted standard will not affect any groundwater users of community water supply wells, non-community water supply wells, or residential wells. *Id.* The Board therefore finds that Section 814.402(b)(3)(D) of the Board's landfill regulations is met.

**Section 814.402(b)(3)(E): The availability of alternative drinking water supplies**

Brickyard contends that there are no potable wells that could be potentially impacted as a result of the requested adjusted standard. Pet. at 30. Drinking water is delivered to most consumers and residents in the vicinity of Brickyard I via a public water supply operated by Aqua Illinois. Pet. at 30; Pet. Exh. B at 15. The other areas not served by Aqua Illinois may obtain alternate drinking water from bulk supplies (tanks), bottled water, and groundwater from deeper geologic formations. Pet. at 30. The Board finds that sufficient alternative drinking water supplies exist to support Brickyard's requested relief.

**Section 814.402(b)(3)(F): The existing quality of the groundwater**

Brickyard engaged in comprehensive well sampling around Brickyard I to gauge the groundwater quality. Pet. at 30. Brickyard found that background concentration exceedances were the result of spatial variability between upgradient and down gradient groundwater quality rather than the result of impacts from Brickyard I or the fill area. Pet. Exh. B at 16-18. The potential sources of contamination from Brickyard I are the waste unit, the fill area outside the permitted boundary of the waste unit, and the former coal mining activities. *Id.*; Pet. at 30. The results of the sampling and the exceedances were greatly influenced by background considerations upgradient of Brickyard I. Pet. at 30; Pet. Exh. B, Tables 1-4.

Brickyard asserts that the proposed adjusted standard will allow for a more effective monitoring of actual groundwater conditions and the placement of permanent monitoring wells in an area where potential sources and cumulative effects will be considered. Pet. at 31.

Brickyard also commits to ensuring appropriate cover on the fill areas as one of the conditions of the adjusted standard. *Id.* Therefore, the Board finds that there will be no additional impact to groundwater if the compliance boundary is adjusted consistent with Brickyard's amended petition.

**Section 814.402(b)(3)(G): Public health, safety, and welfare**

The Board agrees that granting the adjusted standard will allow for greater protection against any potential risk and harm to the public health, safety, or welfare. Brickyard provided analysis of the slope stability, mass stability, air quality, groundwater and surface water quality, leachate collection system capacity, cover thickness over the fill area, and costs of the cover plan and removal of the extraneous material. Pet. at 31; Pet. Exh. B at 26. Such information supports Brickyard's assertions that the temporary groundwater monitoring well network already in place can adequately monitor the groundwater quality on the perimeter of both Brickyard I and the fill area to ensure exceedances are discovered and appropriately addressed. Additionally, Brickyard proposes the installation of a permanent groundwater monitoring network as approved by the Agency in a significant modification to Brickyard's permit. Pet. Exh. B at 35. That permanent groundwater monitoring network will monitor potential impacts of the landfill and fill area during the post-closure care period. Am. Pet. at 14. Brickyard asserts, and the Board agrees, that removing the extraneous materials could potentially lead to negative effects to public health, safety, and welfare. Therefore, the Board finds that the requested relief is consistent with Section 814.402(b)(3)(G) of the Board's landfill regulations.

**Section 814.402(b)(3)(H): In no case shall the zone of compliance extend beyond the facility property line or beyond the annual high water mark of any navigable surface water**

Brickyard submitted a revised Figure 1 with the amended petition that shows the horizontal and vertical extent of the zone of attenuation, the edge of which is the proposed compliance boundary. Am. Pet at 11; Am. Pet. Figure 1. The revised Figure 1 also shows that the proposed compliance boundary is within the facility's property line. *Id.* Further, as discussed above, the Board finds that the "annual high water mark" determined by Brickyard is acceptable for demonstrating compliance with Section 814.402(b)(3)(H) of the Board's landfill regulations. *See supra* at 22-23; 35 Ill. Adm. Code 814.402(b)(3)(H). Further, because 531.82 feet above MSL is the lowest ground surface elevation along the proposed compliance boundary, the Board finds that the proposed compliance boundary does not violate the protections imposed by Section 814.403(b)(3)(H) of the Board's landfill regulations.

**Section 814.402(b)(3)(I): Notwithstanding the limitations of subsection 814.402(b)(3)(H), in no case shall the zone of compliance at an existing MSWLF unit extend beyond 150 meters from the edge of the unit**

Brickyard submitted a revised Figure 1 with its amended petition that shows the horizontal and vertical extent of the zone of attenuation, the edge of which is the proposed compliance boundary. Am. Pet at 11; Am. Pet. Figure 1. The revised Figure 1 also shows that the proposed compliance boundary is within 150 meters (approximately 492 feet) from the edge of Brickyard I. *Id.* Thus, the Board finds that the proposed compliance boundary and the zone

of attenuation satisfy Section 814.402(b)(3)(I) of the Board's landfill regulations. 35 Ill. Adm. Code 814.402(b)(3)(I).

Based on the factors considered above, the Board finds that the relief requested in Brickyard's amended petition will not result in contamination of groundwater potentially needed or used for human consumption. Therefore, Brickyard has sufficiently proven that the proposed alternative compliance boundary is appropriate pursuant to Section 814.402(b)(3) of the Board's landfill regulations.

### **ADJUSTED STANDARD CONDITIONS**

Brickyard proposed several conditions as part of the adjusted standard language. Pet. Exh. A. Brickyard revised the proposed adjusted standard language and added three more conditions in its Amended Petition. Am. Pet. Exh. A. Condition 1 sets forth the adjusted compliance boundary as shown in revised Figure 1 of the amended petition. *Id.*, Figure 1. Next, Conditions 2 and 3 set forth the modified definition of "zone of attenuation", monitoring well locations, and determination of zone of attenuation applicable to Brickyard I in lieu of the generally applicable provisions under Part 811 of the Board's solid waste regulations. 35 Ill. Adm. Code Part811. In accordance with the discussion of annual high water mark, the Board has added Condition 2(c) that requires Brickyard to ensure that the compliance boundary and zone of attenuation will not extend beyond the annual high water mark of the Vermilion River. Conditions 4 through 6 specify deadlines for installation of the groundwater monitoring network and cover over the extraneous materials.

Brickyard added Conditions 7, 8, and 9 in response to the Board's request for clarification on institutional controls. Am. Pet. at 13-15. Specifically, Condition 7 addresses post-closure maintenance of cover over extraneous materials, Condition 8 requires Brickyard to include the fill areas on the deed to be recorded upon completion of closure, and Condition 9 ensures that any exceedance of applicable groundwater standards caused by the extraneous materials will be addressed in accordance with the requirements of Parts 811 and 814 of the Board's solid waste and landfill regulations. Am. Pet. at 15; 35 Ill. Adm. Code Part811, 814.

The Board notes that Section 28.1(a) of the Act allows the Board to impose conditions as may be necessary to accomplish the purposes of the Act. *See* 415 ILCS 5/28.1(a) (2012); 35 Ill. Adm. Code 104.428(a). The Board finds that the proposed modifications to the zone of attenuation and monitoring well location provisions, and deadlines for installation of groundwater monitoring network and cover are appropriate for the closure of Brickyard I. Further, the proposed conditions pertaining to post-closure maintenance of cover over extraneous materials and groundwater monitoring address the Board's concerns regarding institutional controls. Therefore, the Board will adopt the proposed adjusted standard conditions with some minor changes.

### **CONCLUSION**

The Board finds that Brickyard has sufficiently demonstrated that the factors relating to Brickyard I are substantially and significantly different from the factors considered by the Board in adopting the rules of general applicability for the definition of the zone of attenuation (35 Ill.

Adm. Code 810.103), location of groundwater monitoring wells (35 Ill. Adm. Code 811.318(b)(3)), and the determination of the zone of attenuation (35 Ill. Adm. Code 811.320(c)). Further, the Board finds that Brickyard has justified an adjusted standard and that the requested relief is consistent with federal law. The Board also finds that 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. Further, Brickyard has sufficiently addressed the factors as they relate to the designation of the zone of attenuation and adjusted compliance boundary under Section 814.402(b)(3) of the Board's landfill regulations. Therefore, the Board grants the adjusted standard subject to conditions laid out in the Order, below.

### **ORDER**

Pursuant to Section 28.1 of the Act (415 ILCS 5/28.1) (2012)) and Section 814.402(b)(3) of the Board's landfill regulations (35 Ill. Adm. Code 814.402(b)(3)), the Board grants Brickyard Disposal and Recycling, Inc. (Brickyard) an adjusted standard from the definition of "zone of attenuation" in 35 Ill. Adm. Code Section 810.103 and requirements of 35 Ill. Adm. Code Sections 811.318(b)(3) and 811.320(c). 35 Ill. Adm. Code 810.103, 811.318(b)(3), 811.320(c). The adjusted compliance boundary and the designated zone of attenuation, as set forth below, are applicable to Brickyard's Unit I (permit 1981-24-DE, Site Number 1838040029) located at 601 Brickyard Road, Danville, Vermilion County.

1. The compliance boundary for Brickyard I is adjusted to the line as shown in attached Figure 1 that is 100 feet or less from the waste boundary of Brickyard I or the extent of the extraneous materials, whichever is relevant.
2. Zone of Attenuation.
  - a. The definition of "zone of attenuation" from 35 Ill. Adm. Code 810.103 is modified as applied to Brickyard I as follows:
 

"Zone of attenuation" means the three dimensional region formed by excluding the volume occupied by the waste placement in Brickyard I from the volume resulting from a vertical plane drawn from the compliance boundary to the bottom of the uppermost aquifer as shown in the attached Figure 1.
  - b. The provisions of 35 Ill. Adm. Code Section 811.320(c)(1) ("Determination of the Zone of Attenuation") are modified as applied to Brickyard I as follows:

The zone of attenuation, within which concentrations of constituents in leachate discharged from the unit may exceed the applicable groundwater quality standards of 35 Ill. Adm. Code 814.402(b)(3), is a volume bounded by a vertical plane at the compliance boundary line shown in attached Figure 1 extending from the ground surface to the bottom of the

uppermost aquifer, as shown by elevation contours in Figure 1, and excluding the volume occupied by the waste in Brickyard I. The Zone of Attenuation will include any areas containing extraneous materials.

- c. If the compliance boundary extends beyond the annual high water mark of the Vermilion River at any location, the zone of attenuation will be reduced to satisfy the requirements of 35 Ill. Adm. Code 811.320(c)(2) and 35 Ill. Adm. Code 814.402(b)(3)(H).
3. The provisions of 35 Ill. Adm. Code Section 811.318(b)(3) (“Standards for Location of Monitoring Points”) are modified as follows:
 

Monitoring wells shall be established as close as possible to the potential source, either the waste boundary of Brickyard I or the maximum extent of the area containing extraneous materials, within the zone of attenuation downgradient, with respect to groundwater flow, from the source.
4. Within 90 days of the date of this Order, Brickyard shall submit a significant permit modification application to the Illinois Environmental Protection Agency (Agency) for approval of the groundwater monitoring well network for Brickyard I consistent with the relief granted herein.
5. Within 12 months of the date of this Order, Brickyard shall complete installation of the final groundwater monitoring well network following the permitting process through a significant modification permit application.
6. Within 12 months of the date of this Order, Brickyard shall complete placement of additional cover to those areas identified in the Cover Plan (Pet. Exh. C), and as otherwise determined necessary during cover placement operations. The Construction Certification Report shall be submitted to the Agency within 60 days of completion of cover placement.
7. Brickyard shall maintain said cover consistent with the Cover Plan (Pet. Exh. C, Section 4.4, at 7.) until such time as the post-closure care for Brickyard I is concluded.
8. Brickyard shall identify the area containing extraneous materials on the deed, which must be recorded upon completion of closure activities, as set forth in Section 811.110(g) of the Board’s solid waste regulations and shall be subject to the restriction set forth in Section 811.110(h) of those regulations.
9. Any releases indicated by the groundwater monitoring network shall be subject to 35 Ill. Adm. Code Parts 811 and 814 as applicable and appropriate.

IT IS SO ORDERED.

Section 41(a) of the Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2012); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on March 5, 2015 by a vote of 4 to 0.

A handwritten signature in black ink, reading "John T. Therriault". The signature is written in a cursive style with a long horizontal flourish at the end.

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John T. Therriault, Clerk  
Illinois Pollution Control Board