

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

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-
)	(Adjusted Standard - Land)
)	
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NOTICE OF FILING

PLEASE TAKE NOTICE that today I have filed with the Office of the Clerk of the Pollution Control Board the Petition for Adjusted Standard and the Appearances of Claire A. Manning and William D. Ingersoll. Copies of these documents are hereby served upon you.

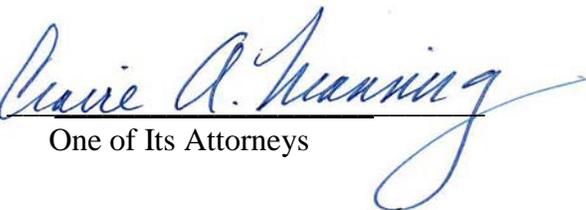
To: Pollution Control Board, Attn: Clerk
100 West Randolph Street
James R. Thompson Center, Suite 11-500
Chicago, Illinois 60601-3218

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dated: June 27, 2014

Respectfully submitted,
BRICKYARD DISPOSAL & RECYCLING,
INC.

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By: 
One of Its Attorneys

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BRICKYARD DISPOSAL &)	
RECYCLING, INC. FOR AN ADJUSTED)	AS 14-
STANDARD PURSUANT TO 35 ILL.)	(Adjusted Standard - Land)
ADM. CODE 814.402(B)(3) and FROM 35)	
ILL. ADM. CODE 810.103, 811.318(b)(3))	
and 811.320(c))	

ENTRY OF APPEARANCE

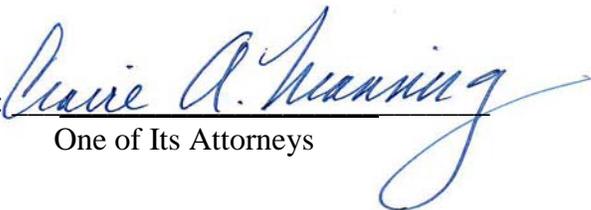
The undersigned, Claire A. Manning, hereby enters her appearance in the above-titled proceeding on behalf of Brickyard Disposal & Recycling, Inc.

Dated: June 27, 2014

Respectfully submitted,
BRICKYARD DISPOSAL & RECYCLING,
INC.

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and 811.320(c))	

ENTRY OF APPEARANCE

The undersigned, William D. Ingersoll, hereby enters his appearance in the above-titled proceeding on behalf of Brickyard Disposal & Recycling, Inc.

Dated: June 27, 2014

Respectfully submitted,
BRICKYARD DISPOSAL & RECYCLING,
INC.

BROWN, HAY & STEPHENS, LLP

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By: _____
One of Its Attorneys

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

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-
)	(Adjusted Standard - Land)
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PETITION FOR ADJUSTED STANDARD

NOW COMES Brickyard Disposal & Recycling, Inc. (“Brickyard” or “Petitioner”), by and through its attorneys Brown, Hay & Stephens, LLP, and respectfully petitions the Illinois Pollution Control Board (“Board”) to grant an adjusted standard pursuant to Section 28.1 of the Illinois Environmental Protection Act (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 regulations (35 Ill. Adm. Code 814.402.(b)(3)).¹ Brickyard requests adjusted standard relief related to the requirements of Sections 810.103, 811.318(b)(3), 811.320(c) and 814.402(b)(3).

I. BACKGROUND

The Petitioner 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. The Petitioner’s landfill facility consists of two separate waste units: Unit I (“Brickyard I”) and Unit II (“Brickyard II”), separated by a haul road. Together, the units cover approximately 152 acres within a 293 acre site. Located at 601 Brickyard Road, Danville, Illinois, the facility has been assigned IEPA Bureau of Land I.D. #1838040029. Brickyard II, lying to the north of Brickyard I, is still an operational landfill and is not relevant to this Petition.

¹ Hereinafter, references to Board regulations will be by section number only.

Rather, this Petition concerns Brickyard I, an “existing landfill” under the Board’s landfill regulations. *See* 35 Ill. Adm. Code Part 814, Subpart D. Brickyard I was initially permitted by the IEPA in 1981 (Log. No. 1981-24-DE). It is located in an area that had been disturbed by surface mining, primarily for coal and shale. Brickyard I ceased accepting waste in 1997, and initiated closure at that time. Brickyard I is considered an “existing landfill” under state landfill regulations as it pre-existed the newer federal Resource Conservation and Recovery Act (“RCRA”) rules, commonly known as the “Subtitle D” rules, which have now been incorporated into state regulations. As such, Brickyard I is regulated pursuant to 35 Ill. Adm. Code Part 814, Subpart D (“Subpart D”) of the Board’s regulations. The landfill has been in the closure process since 1997, pursuant to Subpart D. The Petitioner ultimately intends to seek final closure and post-closure care certification approvals from the IEPA, but it is first necessary to obtain an adjusted standard to facilitate those approvals.

Brickyard has been engaged in discussions with the IEPA concerning permitting required to achieve effective closure, and then to allow appropriate completion of post-closure care. As a result of those discussions and the unique circumstances at this site, Petitioner seeks this adjusted standard. During the landfill’s operation, railroad ties and other construction debris (“extraneous materials”)² were deposited and/or utilized in an area contiguous to the landfill (“fill area”), and now provide stability and support for Brickyard I, so that any environmentally responsible final closure will require consideration of this fill area. To adequately address monitoring of Brickyard I and the fill area, an adjustment to the groundwater compliance boundary and related regulatory provisions is required. Such regulatory adjustment will allow the parties to fashion a workable

² The phrase “extraneous materials” is used herein simply as a method of generically referring to the historically deposited material outside the permitted area of the landfill but contiguous thereto, not an attempt to classify the deposited material, in the context of this Petition, by a specific statutory definition.

closure and post-closure care monitoring plan that allows for permitted groundwater monitoring outside of the fill area, while still within the regulatory maximum distances.

II. RELIEF REQUESTED

Simply stated, the Petitioner needs to move various groundwater monitoring locations for Brickyard I further outward from edge of the permitted unit such that none are located within the area including or encompassed by the extraneous materials. To obtain IEPA permit approval for such a change, regulatory relief is necessary. Such regulatory relief was originally thought to be available solely through the justification process set forth in Section 814.402(b)(3) as to the “compliance boundary.” However, the Board interpreted that section to also require a “zone of attenuation” determination.³ Pursuant to that decision of the Board, Petitioner now seeks, pursuant to Section 814.402(b)(3), an adjusted compliance boundary and a designation of a zone of attenuation. Further, the Petitioner seeks the following additional relief, as necessary: an adjustment to the definition of zone of attenuation (Section 810.103); the determination of a zone of attenuation (Section 811.320(c)); and certain standards for the location of groundwater monitoring points (Section 811.318(b)(3)). See Exhibit A (Proposed Board Order).

III. ANALYSIS OF ADJUSTED STANDARD PETITION FACTORS

Section 28.1 of the Act provides the Board with the authority to grant an adjusted standard for persons who can justify an adjustment in one of two ways provided for in the statute. 415 ILCS 5/28.1. When the Board specifies a level of justification for an adjusted standard in the rule of general applicability, then that level of justification is used to determine whether the Board will grant the relief sought. 415 ILCS 5/28.1(b). Alternately, when a rule of general applicability does not provide a level of justification, the Board utilizes the factors

³ See *In the Matter of Adjusted Standard for Brickyard*, AS13-04 (Opinion and Order, January 23, 2014).

provided in Section 28.1 of the Act when making the adjusted standard determination. 415 ILCS 5/28.1(c).

The rule of general applicability (35 Ill. Adm. Code Part 814, Subpart D) provides a level of justification required of a petitioner for an adjusted standard for certain relief. Section 814.402(b)(3) allows an adjustment to the compliance boundary and along with that, a zone of attenuation. As such, Section 814.402(b)(3) will govern the Board's decision regarding the relief sought for an adjustment to the compliance boundary and zone of attenuation. Each of the 814.402(b)(3) factors is addressed in Section III.C. of this Petition and in a Technical Support Document, prepared by Andrews Engineering, Inc. (AEI) which is attached hereto as Exhibit B.⁴ The relief requested that may not be governed by the factors in Section 814.402(b)(3) (Section 810.103, Section 811.320(c) and Section 811.318(b)(3) relief) are here analyzed based on the factors listed in Section 28.1(c) of the Act, which are addressed in Section III.A. of this Petition. Section III.B. of this Petition addresses the petition content requirements set forth in Section 104.406. In sum, in this Petition, Petitioner justifies the requested adjusted standard on the basis of the adjusted standard factors listed in Section 28.1(c) of the Act, Section 104.406 of the Board's Procedural Rules (Petition Content Requirements), and Section 814.402(b)(3).

A. SECTION 28.1(c) STATUTORY FACTORS

Section 28.1 of the Act allows the Board to grant adjusted standard relief pursuant to specific factors, which are all met here. Specifically Section 28.1(c) provides:

- (c) If a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by petitioner, that:

⁴ The AEI report is hereinafter referred to as Exhibit B, AEI Tech. Supp. Doc.

- (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 that 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(c)

The above-referenced general adjusted standard factors are analyzed below.

1. Substantially Different

Given the definitions in Sections 810.103, 811.320(c) and Section 811.318(b)(3), as well as the historic nature and technical challenges relative to the fill area outside the defined perimeters of Brickyard I, Brickyard faces conditions that were not contemplated during the promulgation of these rules of general applicability – now some 30 years ago. A literal application of the rules would seem to require monitoring wells directly at the unit’s edge. That would make it very difficult to accomplish the underlying goal of groundwater monitoring of the potential sources of contamination – *i.e.*, to monitor a release before it migrated very far, and then respond to it before it could affect or threaten others. Further, some of the wells at the edge of Brickyard I would then be directly in the waste-like extraneous materials. The factors facing Petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the applicable rules of general applicability.

For this Subpart D facility, the Board’s regulations of general applicability do not provide for a zone of attenuation. Further, the compliance boundary is defined as being at the edge of the unit. *See* language in Section 814.402(b): “(a) unit shall not contaminate a source of drinking

water at the compliance boundary, defined as any point on the edge of the unit ...” Without an adjusted compliance boundary and zone of attenuation, Section 811.318(b)(3) would seem to require monitoring points directly at the edge of Brickyard I. That Section reads:

- b) Standards for the Location of Monitoring Points
 - 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.

Further complicating Brickyard’s situation is the Board’s definition of “zone of attenuation” in Section 810.103(d), which states:

“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.

Also, Section 811.320(c) provides the requirements for the determination of a zone of attenuation, from which relief is needed for moving the various groundwater monitoring locations for Brickyard I further outward from edge of the permitted unit such that none are located directly above the fill area.

2. Those Factors Justify an Adjusted Standard

Brickyard I was first permitted in 1981. Brickyard I accepted its last load of waste in 1997, and initiated closure at that time, pursuant to Part 814, Subpart D. The fill area contiguous to Brickyard I pre-existed initiation of closure and the onset of the federal Subtitle D rules. No waste has been accepted at Brickyard I, or fill placed in the contiguous area, since 1997. However, best engineering practices related to closure and post-closure care require that the area be considered and integrated into the technical strategy for final closure and post-closure care.

Specifically, this adjusted standard would allow the facility to monitor outside the fill area, so that potential impacts from either the permitted landfill unit or the contiguous fill area are considered, understood, and, if necessary, remediated. The adjusted standard is a necessary and appropriate means of dealing with the fill area since removal is not an environmentally sound or economically viable option. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.7, Sections 4.7.1-4.7.6 and Section 5.3. This historic fill area provides support and stabilization of the existing landfill such that the fill area, in essence, provides a partial but essential framework for the existing landfill. Accordingly, environmentally responsible final closure must consider this area when seeking final closure and post-closure care permitting for Brickyard I. As the regulations do not directly contemplate a scenario like this, this adjusted standard is necessary to achieve final closure permit approvals.

As part of the closure process for Brickyard I, the Petitioner developed an assessment monitoring plan (Application Log Nos. 2004-098 and 2005-036) pursuant to Permit Condition VIII.A. 15. The application was approved by the IEPA on April 29, 2005 and temporary assessment monitoring wells (T106, T107 and T108) were installed. During the installation of these temporary wells the contractors investigated extraneous materials outside the permitted boundary of the landfill, but within the facility grounds and located in the area directly within the otherwise appropriate area for the location of the monitoring wells. Due to concerns related to locating the temporary assessment wells directly above the extraneous materials, additional investigations were proposed by the Petitioner, approved by the IEPA and implemented by AEI on behalf of the Petitioner. *See* Exhibit B, AEI Tech. Support Doc., at Section 3.

Extensive investigations were conducted in the area bordering Brickyard I, both in July and August of 2006 and again in the fall of 2008. *Id.* As part of the 2006 testing, 13 test pits were completed along the northeast boundary of Brickyard I. *Id.* at Section 3.1. The test pits were conducted in a sequence, chasing the extraneous material, or spot-checks verifying previous information. *Id.* The results of the 2006 investigation indicated that the extraneous material was sporadic, but present more consistently west of the eastern haul road, and within the area appropriately designated the Groundwater Management Zone (GMZ). *Id.* After discussions with IEPA, an additional field investigation was conducted during August and September of 2008 that included 59 additional test pits along the perimeter of Brickyard I. *Id.* at Section 3.2. The results of this investigation were included as part of Application Log. No. 2006-013. *Id.* The investigation revealed that the extraneous material was primarily broken and shredded railroad ties, with minor amounts of construction and demolition debris, such as scrap metal mixed with soil. *Id.*

These investigation results are consistent with historical documents discovered in IEPA files. For example, in December of 1986 Charles Clark, from Clark Engineering Services wrote a letter to Glen Savage of IEPA which explained:

“[These extraneous materials] presently exceed the boundary of the permitted area along the north slope ... as it is not practical to remove the filled material, and since the company has received an administrative citation for the incursion...no corrective action is proposed.”

In addition, investigation and IEPA files provide the following information. The extraneous material covers approximately 18 acres in three different areas, generally contiguous to Brickyard I. The material was not continuously deposited, but exists in pockets. The entire area around Brickyard I had been historically utilized (and the land disturbed) by surface mining, either for shale, coal, or both.

The Petitioner respectfully suggests that the Board would consider it inappropriate and not conducive to effective monitoring, to have monitoring wells placed directly into waste or waste-like materials such as the extraneous materials here. Yet, a literal reading of the relevant Board rules would require such a result. Previously, the Board has granted adjusted standards for similar reasons. See *In the Matter of Petition of Johns Manville for an Adjusted Standard from 35 Ill. Adm. Code 811.310, 811.311, 811.318, 811.320 and 814*, AS 04-4 (December 6, 2007). While that case is not entirely on point with the present situation (since the Johns Manville landfill was not regulated under Subpart D), and different relief was necessary, the situations are similar in that relief was required *because* of the location of a fill area containing extraneous materials that were not a part of the permitted landfill. In Johns Manville, the location of groundwater monitoring wells was central to the case (Sections 811.318(b)(3) and 811.320(c)), and the decision certainly supports Brickyard's general proposition that adjusted standard relief is appropriate to authorize moving monitoring wells outside of waste areas. At page 17 of the December 6, 2007 Opinion and Order of the Board, an important point is made that is relevant here:

The Board rules pertaining to location of monitoring wells at Section 811.318 (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) and 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. Thus, the Board finds that there exist substantially and significantly different factors for [Johns Manville] than those considered in adopting the rules of general applicability. 415 ILCS 5/28.1(c)(1) (2006).

3. Environmental Effect

The adjusted standard sought here 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. In *Operating and Reporting Requirements for Non-hazardous Waste Landfills*, R88-7 (Aug. 17, 1990), the Board established four objectives that the definition of the zone of attenuation was intended to accomplish:

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.

R88-7, Appendix A1 at 75 (Aug. 17, 1990).

The adjusted standard proposed here would not only provide the most practical approach to solving the issues not considered when the rules of general applicability were promulgated, it would also fulfill the objectives established in R88-7.

First, the adjusted standard sought would establish monitoring points that are as close to the Brickyard I unit as possible, giving due consideration to actual conditions. The rules of general applicability, as applied to Brickyard I, require the placement of monitoring wells in a defined area, within which the extraneous materials are located. Placing monitoring wells in an area containing the extraneous materials would be inappropriate and not conducive to effective monitoring. As such, the adjusted standard sought here would place the monitoring wells just

beyond the areas containing extraneous materials, which is as close to the unit as possible in this case.

The second objective, keeping the volume of geologic material that must be evaluated during a groundwater impact assessment to a minimum is not applicable to Brickyard I pursuant to Section 814.402(a), and is therefore not a relevant objective for consideration here.

The third objective, minimizing any potential contamination, is met because the adjusted standard contemplates placement of the wells beyond the extraneous material. Placing wells just outside of the area impacted by the extraneous material will provide accurate groundwater quality data. The accurate data will minimize false reports of contamination, while still maintaining any area potentially contaminated to a minimum. Any potential contamination that may occur would be discovered in adequate time to address the issue and confine the contamination to a controllable area, minimizing the impact of the contamination while steps are taken to address the issue.

Finally, the proposed adjusted standard is consistent with the fourth objective since placement of wells beyond the extraneous material will establish a boundary capable of discovering any significant increase in the concentration of contaminants, attributable to the unit. This adjusted standard would permit monitoring outside the area where extraneous materials have been deposited, so that potential impacts from either the landfill cell or the contiguous fill area would be considered and understood and, if necessary, remediated. Any increase in contaminants will still be discovered.

The AEI Technical Support Document, in Section 4, provides a detailed analysis of potential environmental effects of the adjusted standard, concluding in Section 4.10.3 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,” and “will allow for greater protection against any unnecessary risk and harm at this site.” Exhibit B, AEI Tech. Support Doc., at Section 4.10.3.

4. Consistency with Federal Law

Brickyard I is a landfill defined and regulated pursuant to Part 814, Subpart D (“Standards for Existing Units Accepting Chemical and Putrescible Wastes that Must Initiate Closure Within Seven Years”). Although certain regulations adopted pursuant to the newer federal Subtitle D regulations may be relevant to various aspects of Brickyard landfill, particularly Brickyard II, Section 814.402 exempts Brickyard I from the following requirements: (1) the location standards in Sections 811.302(a), (c), (d), (e), and (f); (2) the foundation and mass stability analysis standards Sections 811.304 and 811.305; (3) the liner and leachate drainage and collection requirements of Sections 811.306, 811.307, and 811.308; (4) the final cover requirements of Section 811.314 shall not apply to units or parts of units closed, covered and vegetated prior to the effective date of this Part; (5) the hydrogeological site investigation requirements of Section 811.315; (6) the groundwater impact assessment standards of Section 811.317; the groundwater monitoring program requirements of Section 811.318(c); and (7) the groundwater quality standards of Section 811.320(a), (b) and (c).⁵

To the extent Section 811.320(c) and some requirements of Section 811.318 would apply to Brickyard I, the Petitioner contends the requested relief can be granted consistent with federal law and, if granted, would apply in lieu of those Part 811 standards. The proposed Board Order

⁵ The Board, in its Opinion and Order in AS 13-04 (January 23, 2014), at page 17, concluded that “(s)ince Brickyard is requesting the Board adjust the compliance boundary such that the compliance boundary is not at the edge of the unit, the Board finds that the exemption from Section 811.320(c) under Section 814.402(a)(8) would no longer apply.” As this would affect location of monitoring points, Section 811.318 is also addressed in this requested adjusted standard.

(set forth in Exhibit A) so reflects.

Sections 814.402(b) and (e) set forth certain standards that are applicable to Part 814, Subpart D facilities, such as this one. Section 814.402(b) precludes these facilities from expanding or accepting new special wastes. Section 814.402(e) then would attach numerous Part 811 requirements to any lateral expansion. These provisions ensured that existing landfills (those in place prior to the federal Subtitle D rules) not be permitted to expand operations. If operations are expanded outside of these provisions, the exemption from Subtitle D rules no longer applies to the facility. Here, the Petitioner does not seek to expand this pre-Subtitle D landfill; rather, it seeks only to achieve final closure, consistent with the regulatory requirements, giving due consideration to its unique and historic circumstances. The Petitioner does not seek to receive new waste or expand the boundaries of Brickyard I. Instead, it seeks simply to achieve final closure in a manner consistent with existing circumstances. Thus, Sections 814.402(b) and (e) are not implicated. But for the instant request for relief, and the Board's interpretation that it removes some exemption otherwise afforded a Subpart D landfill, the requirements of Part 811 would not be implicated.

Notwithstanding this conclusion, the relief requested here may be granted consistent with the federal Subtitle D requirements. 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 from the waste unit boundary and on the facility property, and the review made in consideration of certain listed factors. *See* 40 C.F.R. § 258.40(d). *See also* Exhibit B, AEI Tech. Support Doc., at Section 4.10.4. The listed factors are conspicuously similar and nearly identical to those found in Section 814.402(b)(3). The adjusted standard process in which the Petitioner, IEPA and Board are here engaged will capably satisfy these requirements.

**B. ADJUSTED STANDARD PETITION CONTENT REQUIREMENTS
PURSUANT TO 35 III. ADM. CODE 104.406**

In Section 104.406 of its procedural rules, the Board has codified the information that is generally required, *as applicable in context*, to demonstrate the appropriateness of an adjusted standard. Following is a discussion of that content information.

1. Standards from Which Adjusted Standard Relief is Sought – Section 104.406(a)

Section 104.406(a) requires “[a] statement describing the standard from which an adjusted standard is sought.” As explained above, the requested relief sought is an adjusted standard that permits the placement of various groundwater monitoring locations for Brickyard I further outward from edge of the permitted unit such that none are located directly within or encompassed by the fill area. To obtain IEPA permit approval for such a change, regulatory relief is needed. Petitioner seeks an adjusted standard for the definition of zone of attenuation (Section 810.103), the determination of a zone of attenuation (Section 811.320(c)) and certain standards for the location of groundwater monitoring points (Section 811.318(b)(3)). *See* Exhibit A (Proposed Board findings and Order). All of these provisions were initially adopted in R88-7 at 14 Ill. Reg. 15861, effective September 18, 1990.

2. Federal Rules Not Implicated – Section 104.406(b)

Section 104.406(b) requires “[a] statement that indicates whether the regulation of general applicability was promulgated to implement, in whole or in part, the requirements of the CWA (33 USC §§ 1251 *et. seq.*), Safe Drinking Water Act (42 USC §§ 300(f) *et seq.*), Comprehensive Environmental Response, Compensation and Liability Act (42 USC §§ 9601

et seq.), CAA (42 USC §§ 7401 *et seq.*), or the State programs concerning RCRA, UIC, or NPDES.” 35 Ill. Adm. Code 104.406(b).

As discussed above, the Board’s Part 811 landfill regulations fully implement the federal regulations concerning landfills, as required by the federal RCRA. The Part 814 regulations provide the segue between the regulations applicable to landfills that existed prior to the effective date of the new federal Subtitle D rules, such as Brickyard I, and to landfills subject to RCRA Subtitle D, such as Brickyard II. The relief requested in this Petition will simply facilitate final closure of an existing (pre-Subtitle D) landfill; the Petition does not seek relief to construct or operate any new unit. Thus, the newer federally required Subtitle D landfill requirements do not preclude the requested relief.

3. Level of Justification Required – Section 104.406(c)

Section 104.406(c) requires the Petitioner to discuss “the information or requirements necessary for an adjusted standard as specified by the regulation of general applicability or a statement that the regulation of general applicability does not specify a level of justification or other requirements.” 35 Ill. Adm. Code 104.406(c). As stated above, the relief sought for the adjusted zone of attenuation and adjusted compliance boundary is subject to a rule of general applicability (35 Ill. Adm. Code Part 814, Subpart D) that provides a level of justification required of a petitioner for the adjusted standard sought here. Section 814.402(b)(3) allows an adjustment to the compliance boundary and along with that, a zone of attenuation. As such, Section 814.402(b)(3) will govern the Board’s decision regarding the relief sought for an adjustment to the compliance boundary and zone of attenuation. The requested relief that may not be governed by Section 814.402(b)(3) (presumably Section 810.103, Section 811.320(c) and Section 811.318(b)(3) relief) nonetheless is justified on the basis of the adjusted standard factors

listed in Section 28.1(c) of the Act.

The 814.402(b)(3) factors that are utilized by the Board in determining zone of attenuation and an adjusted compliance boundary are each addressed in detail in Exhibit B, AEI Tech. Supp. Doc., and in summary fashion in this Petition at Section III.C. The Section 28.1(c) factors are discussed above in Section III.A.

4. Petitioner's Activity is a Pre-Subtitle D Landfill Seeking Closure – Section 104.406(d)

Section 104.406(d) requires the Petitioner to present “[a] description of the nature of the petitioner's activity that is the subject of the proposed adjusted standard. The description must include the location of, and area affected by, the petitioner's activity. This description must also include the number of persons employed by the petitioner's facility at issue, age of that facility, relevant pollution control equipment already in use, and the qualitative and quantitative description of the nature of emissions, discharges or releases currently generated by the petitioner's activity.” 35 Ill. Adm. Code 104.406(d).

As discussed in Section I of this Petition and in greater detail in Exhibit B, AEI Tech. Support Doc., the Petitioner operates a municipal landfill and recycling center, located in Danville, Illinois, for Vermilion County (with a population of approximately 81,000) and the immediate surrounding areas. *See* Exhibit B, AEI Tech. Support Doc., at Section 1.1. While Brickyard II is still open,⁶ Brickyard I is no longer operational and has not accepted waste since 1997.

Brickyard I was first permitted in 1981. *Id.* Brickyard I accepted its last load of waste in 1997, and initiated closure at that time pursuant to Part 814, Subpart D. The fill area contiguous

⁶ Brickyard II was developed after the new federal landfill rules and, accordingly, is a Subtitle D landfill. Brickyard II achieved local siting from Vermilion County in 1992, pursuant to Section 39.2 of the Act. 415 ILCS 5/39.2.

to Brickyard I pre-existed the initiation of closure and the onset of the federal Subtitle D rules. No waste has been accepted at Brickyard I and no fill has been placed in the contiguous area since 1997. However, best engineering practices related to closure and post-closure care require the area to be considered and integrated into the technical strategy for final closure and post-closure care.

Brickyard employs eight full-time employees at the facility located at 601 Brickyard Road. Temporary personnel are hired on an as-needed basis. Republic Services employs additional personnel at its offices located at 180 S. Henning Road in Danville, including truck drivers, maintenance personnel, and those related to local and regional business operations supporting the landfill activities.

The relevant pollution control equipment already in use at Brickyard I includes both gas and leachate extraction systems. 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. Vacuum lines extend to well headers at each location and tie in to the conveyance line that encircles the unit (inside the waste boundary). The conveyance line runs to the main flare unit located east of Brickyard II. Liquid collected in the condensate sumps is conveyed to the leachate storage tank also located east of Brickyard II. Extraction well and conveyance line locations with respect to Brickyard I are provided on Figures 4 and 8 of Exhibit B, AEI Tech. Support Doc.

Pursuant to Section 814.402(a)(3), Brickyard I is not required to incorporate the leachate drainage and collection system. However, leachate is extracted from three manholes (L101, L103, and L104) which are centrally located within Brickyard I, and discharges to the conveyance line which runs to the leachate storage tank east of Brickyard II. Level sensors

discharge liquid from the storage tank via force main to the treatment facility owned by the City of Danville, Illinois. The treatment facility is located directly adjacent to, and east of, the Brickyard facility as shown on Figure 1 to Exhibit B, AEI Tech. Support Doc. The emissions, discharges and releases from Brickyard's activities are qualitatively and quantitatively described in Sections 4.2.2 (leachate) and 4.7.3 (gas) of Exhibit B, AEI Tech. Support Doc.

Specifically, this adjusted standard would allow the facility to monitor outside the area where extraneous materials have been deposited, so that potential impacts from either the landfill cell or the contiguous fill area would be considered and understood and, if necessary, remediated. The adjusted standard is a necessary and appropriate means of dealing with the extraneous material because removal is not an environmentally sound or economically viable option. This fill area provides support to and stabilization of the existing landfill such that the area, in essence, provides a partial but essential framework for the existing landfill. Accordingly, environmentally responsible final closure needs to incorporate the fill area into the technical strategy for final closure and post-closure care. As the regulations do not squarely contemplate this scenario, this adjusted standard is necessary to appropriately locate and permit the monitoring wells.

As part of the closure process for Brickyard I, the Petitioner developed an assessment monitoring plan (Application Log Nos. 2004-098 and 2005-036) pursuant to Permit Condition VIII.A. 15. The application was approved by the IEPA on April 29, 2005, and temporary assessment monitoring wells (T106, T107 and T108) were installed. During the installation of these temporary wells, the contractors investigated extraneous materials used as fill outside the permitted boundary of the landfill, but within the facility grounds and located in the area directly under the otherwise appropriate area for the location of the monitoring wells. Due to concerns

related to locating the temporary assessment wells directly above the extraneous materials, additional investigations were proposed by the Petitioner, approved by the IEPA and implemented by AEI on behalf of the Petitioner. *See* Exhibit B, AEI Tech. Support Doc., at Section 3.

Extensive investigations were conducted in the area bordering Brickyard I, both in July and August of 2006, and again in the fall of 2008. *Id.* at Sections 3.1 and 3.2. As part of the 2006 testing, 13 test pits were completed along the northeast boundary of Brickyard I. *Id.* at Section 3.1. The test pits were conducted in sequence, chasing the extraneous fill material, or spot-checks verifying previous information. *Id.* The results of the 2006 investigation indicated that the fill material was sporadic, but present more consistently west of the eastern haul road, and within the area appropriately designated the Groundwater Management Zone (“GMZ”). *Id.* After discussions with IEPA, an additional field investigation was conducted during August and September of 2008, which included 59 additional test pits along the perimeter of Brickyard I. *Id.* at Section 3.2. The results of this investigation were included as part of Application Log. No. 2006-013. *Id.* The investigation revealed that the material was primarily broken and shredded railroad ties, with minor amounts of construction and demolition debris, such as scrap metal mixed with soil. *Id.*

These investigation results are consistent with historical documents discovered in IEPA files. For example, the previously mentioned letter dated December 1986 by Charles Clark, of Clark Engineering Services, to Glen Savage of IEPA explained that extraneous materials exceed the boundary of the permitted area, it was not practical to remove the extraneous fill material, and no corrective action was proposed. In addition, investigation and IEPA files provide that the fill material covers approximately 18 acres in three different areas, generally contiguous to

Brickyard I. Further, investigation and IEPA files state that the material was not continuously deposited, but exists in pockets. The entire area around Brickyard I has been historically utilized (and the land disturbed) by surface mining, either for shale, coal, or both.

Responding to pre-filing comments from IEPA, AEI, in October and November 2012, performed additional investigation of the existing cover overlying areas with the extraneous materials. The report of that investigation may be found in Exhibit C, "Extraneous Materials Cover Plan." The investigation showed that the vast majority of the areas with extraneous materials had considerable cover with very low hydraulic conductivity. *See also* Exhibit B, AEI Tech. Support Doc., at Section 4.7.7.1. In addition, the Cover Plan includes plans for Brickyard I to insure that all these areas have at least two feet of protective cover and six inches of a vegetative layer, which will provide further reduction in any potential impact of the extraneous material.

The Petitioner has developed cost estimates for oversight and implementation of the Cover Plan for a total estimated cost of \$573,018. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.7.7 and Table 5. The estimates provided include costs for a third party contractor to perform construction services at Brickyard I. Construction services to be provided by the contractor will include the following activities: clearing and grubbing; placement of additional compacted cover soils and sidewall berms; placement of topsoil; and vegetation establishment over the disturbed areas (including mulch, seed, fertilizer and turf reinforcement mat over the sidewall berms). Additional costs have been included for construction quality control by a registered professional engineer. Completion time for the project would include the actual construction time and possible delays caused by inclement weather. The Petitioner, in the Proposed Board Order (Exhibit A), has therefore recommended a 12-month completion

requirement for the project. While not directly relevant to the regulatory relief specifically sought, Brickyard seeks to include this construction commitment in the proposed Board Order, consistent with discussions with IEPA, to ensure environmental protection as it relates to the extraneous fill area. The proposed language is adequate for the activities described and accounting for any delays such as weather.

5. Compliance Efforts, Alternatives and Costs – Section 104.406(e)

Section 104.406(e) requires the Petition to provide: “a description of the efforts that would be necessary if the Petitioner was to comply with the regulation of general applicability. All compliance alternatives, with the corresponding costs for each alternative, must be discussed. The discussion of costs must include the overall capital costs as well as the annualized capital and operating costs.” 35 Ill. Adm. Code 104.406(e). Petitioner sets forth the following rationale, as related to the context of the Brickyard I situation.

Compliance with the rule of general applicability, without invoking the groundwater compliance adjustment allowed for in Section 814.402(b)(3), would require the Petitioner to monitor directly through the extraneous material buried outside the landfill cell. This is problematic, of course, as potential groundwater impacts from the landfill are not capable of accurate assessment because any potential impact can be related to the extraneous material, as opposed to the landfill. Nonetheless, the Petitioner recognizes that the source of any impact (the landfill or the buried material outside the landfill) is irrelevant as the Petitioner, the owner of the entire landfill area, is responsible for such impacts. These factors were the subject of pre-filing discussions with the IEPA, leading to this Petition. Thus, from an environmental perspective, the Petitioner believes that monitoring outside this area is appropriate, as monitoring will then be able to ascertain *any* impact, whether it be from the landfill or from the extraneous material.

The only other alternative discussed and considered was removal of the extraneous material that was historically placed outside the landfill. The estimated cost for such removal would be considerable, at an estimated \$47,285,326.00. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.7.7.1 and Table 6. Such a cost is an extraordinary burden for a facility that is in the process of closure, with very little opportunity to recoup the costs of such removal. Further, removal is not a viable alternative due to the potential adverse environmental impact. Removal would jeopardize the stability of the existing landfill such that the minimum safety factors under the Board's Part 811 rules could not be met. *See* 35 Ill. Adm. Code 811.304(d). Removal of 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. It would require dewatering which could promote mine void collapse, liner fatigue and possible failure, and other potentially serious problems. *See* Exhibit B, AEI Tech. Support Doc., at Section 5.3.

For these reasons, the proposed adjusted standard constitutes an appropriate regulatory solution to achieve the permitting necessary for effective closure and post-closure care monitoring, consistent with the spirit of the landfill regulations. To justify the adjusted standard the Petition invokes the specific regulatory framework the Board has promulgated in Section 814.402(b)(3) and, as well, the following additional regulatory provisions: definition of zone of attenuation (Section 810.103); determination of a zone of attenuation (Section 811.320(c)); and certain standards for the location of groundwater monitoring points (Section 811.318(b)(3)). The proposed adjusted standard allows for a more sensible approach than the one that would otherwise be required.

6. Proposed Adjusted Standard and Related Efforts and Costs – Section 104.406(f)

Section 104.406(f) requires “[a] narrative description of the proposed adjusted standard

as well as proposed language for a Board Order that would impose the standard. Efforts necessary to achieve this proposed standard and the corresponding costs must also be presented.”

35 Ill. Adm. Code 104.406(f).

The Petitioner proposes an adjusted standard pursuant to Section 814.402(b)(3) to adjust the Brickyard I compliance boundary outward from both the edge of the unit and the edge of the extraneous materials adjacent to the unit. Adjustment of the compliance boundary then also necessitates modifications to the definition of “zone of attenuation” from Section 810.103, and the location standards for groundwater monitoring in Section 811.318(b)(3). The Petition also seeks modification of Section 811.320(c) to determine an appropriate zone of attenuation for Brickyard I. Specific language for Board findings and Order may be found in the attached Exhibit A.

As discussed throughout this Petition, the objective is to allow Brickyard I groundwater monitoring wells to be located outside the waste unit and any of the extraneous material, but still within an appropriate distance so as to be able to monitor and timely catch any groundwater exceedences. The requested adjusted standard would move the compliance boundary outward to 100 feet outside of the boundary of the waste unit or 100 feet outside of any extraneous materials where those are present.⁷ A zone of attenuation would then be specified as all of the volume outside the waste unit and inside a vertical plane at the new compliance boundary. This 100 foot designation was the subject of pre-filing discussions with the IEPA and is consistent with the regulations relevant to newer landfills which, overall, are generally considered to be more protective than the regulations applicable to older or previously existing landfills. *See* 35 Ill.

⁷ This proposed compliance boundary and outer limit of the zone of attenuation is within the property boundary and is within 150 meters of the waste unit. Exhibit B, AEI Tech. Support Doc., at Section 4.9 and Figures 6 and 10. Further, neither reaches the annual high water mark of any navigable surface water. Exhibit B, AEI Tech. Support Doc., at Section 4.8.

Adm. Code 811.320(c)(1).

7. Quantitative and Qualitative Environmental Impact of Compliance with Existing Regulations versus Adjusted Standard – Section 104.406(g)

Section 104.406(g) requires a discussion of “[t]he quantitative and qualitative description of the impact of the petitioner's activity on the environment if the petitioner were to comply with the regulation of general applicability as compared to the quantitative and qualitative impact on the environment if the petitioner were to comply only with the proposed adjusted standard. To the extent applicable, cross-media impacts must be discussed. Also, the petitioner must compare the qualitative and quantitative nature of emissions, discharges or releases that would be expected from compliance with the regulation of general applicability as opposed to that which would be expected from compliance with the proposed adjusted standard.” 35 Ill. Adm. Code 104.406(g).

Compliance with the proposed adjusted standard is not expected to increase the impact on the environment as compared to compliance with the regulation of general applicability. Actually, placing the groundwater monitoring points outside of the extraneous materials will provide much more accurate groundwater monitor results. This will result in an improvement by being able to quickly identify and respond to any measured exceedences. The AEI Technical Support Document, in Section 4, provides a detailed analysis of potential environmental effects of the adjusted standard, concluding in Section 4.10.3 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,” and “will allow for greater protection against any unnecessary risk and harm at this site.” Exhibit B, AEI Tech. Support Doc., at Section 4.10.3. This issue is discussed in greater detail above in Section III.A.3.

8. Justification of Proposed Adjusted Standard – Section 104.406(h)

Section 104.406(h) requires that Petitioner explain how it “seeks to justify, pursuant to the applicable level of justification, the proposed adjusted standard.” 35 Ill. Adm. Code 104.406(h). The adjusted standard is a necessary and appropriate means of dealing with the fill area since removal is not an environmentally sound or economically viable option. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.7, Sections 4.7.1-4.7.6 and Section 5.3. This issue is discussed in greater detail in Section III.A.2., above and throughout this Petition.

9. Consistency with Federal Law – Section 104.406(i)

Section 104.406(i) requires “[a] statement with supporting reasons that the Board may grant the proposed adjusted standard consistent with federal law. The Petitioner must also inform the Board of all procedural requirements applicable to the Board’s decision on the petition that are imposed by federal hazardous waste laws are not required by this Subpart. Relevant regulatory and statutory authorities must be cited.” 35 Ill. Adm. Code 104.406(i).

This adjusted standard request is consistent with federal law and there are no additional procedural requirements imposed by federal law. Federal law is not implicated because none of the extraneous material constitutes hazardous waste. Petitioner has addressed this issue in the discussion of Section 28.1(c) factors in Section III.A.4. of this Petition, and reincorporates the statements of Section III.A.4. here. *See also* Exhibit B, AEI Tech. Support Doc., at Section 4.10.4.

10. Hearing Waiver – Section 104.406(j)

Section 104.406(j) requires Petitioner to include “[a] statement requesting or waiving a hearing on the petition.” 35 Ill. Adm. Code 104.406(j). The Petitioner hereby waives hearing on this Petition.

11. Supporting Documents – Section 104.406(k)

Section 104.406(k) necessitates that Petitioner “cite to supporting documents or legal authorities whenever they are used as a basis for the petitioner's proof. Relevant portions of the documents and legal authorities other than Board decisions, State regulations, statutes, and reported cases must be appended to the petition.” 35 Ill. Adm. Code 104.406(k).

Enclosed with this Petition is Exhibit B, a Technical Support document prepared by AEI specifically as justification for this adjusted standard and Exhibit C, the “Extraneous Materials Cover Plan.” AEI is an engineering firm with vast landfill experience, including specific experience with the Brickyard units. Reference documents are appropriately cited.

12. Any additional information which may be required in the regulation of general applicability – Section 104.406(l)

Section 104.406(l) allows the Petitioner to provide whatever other information may be relevant. Adjusted standard requirements and responsive information are discussed in terms of Section 28.1(c) of the Act, Section 104.106 of the Board’s Procedural Rules and Section 814.402(b)(3), which should provide all the information required for the Board to grant the requested adjusted standard. Additionally, an extensive Technical Support Document is provided as Exhibit B with extensive narrative discussion, data, figures and tables.

C. SECTION 814.402(b)(3): ALTERNATIVE COMPLIANCE BOUNDARY AND ZONE OF ATTENUATION DETERMINATIONS FOR SUBPART B LANDFILLS

Section 814.402(b)(3) specifically allows the Board to provide for a zone of attenuation and adjust the compliance boundary for Subpart B landfills, such as Brickyard I, in accordance with Section 28.1 of the Act and the procedures of 35 Ill. Adm. Code 104, Subpart D⁸ upon

⁸ Section 814.402(b)(3) actually refers to 35 Ill. Adm. Code 106, Subpart G, which was an earlier version of the adjusted standard procedural requirements now found in 35 Ill. Adm. Code 104, Subpart D.

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. The rule sets forth various factors the Board is to consider in making such determinations, which are addressed below.

1. 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 hydrogeological characteristics of the unit and the surrounding land do not pose an environmental risk if the adjusted standard is approved, and the adjusted standard will allow for more appropriate monitoring of actual conditions. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.1. The hydrogeological characteristics of Brickyard I and the surrounding area are influenced by the historic coal mining activities around Brickyard I that impact the groundwater quality and potentiometric surface characteristics of the Brickyard I area. Exhibit B, AEI Tech. Support Doc., at Section 4.1.1. 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, and the spoil-bedrock interface where surface mining has historically occurred. *Id.* at Section 4.1.2. The pathway is continuous beneath Brickyard I, with overall groundwater movement from west to east. *Id.* Due to mechanical disturbance of the bedrock surface east of Brickyard I, the groundwater movement further east of Brickyard I can vary. *Id.* The hydrogeological characteristics of Brickyard I and the surrounding land are explored in more detail in Section 4.1 of Exhibit B, AEI Tech. Support Doc.

2. Section 814.402(b)(3)(B): The volume and physical and chemical characteristics of the leachate.

The amount and nature of leachate at the facility will not be affected if the adjusted standard is granted. Under normal conditions, approximately 18,850,000 gallons of leachate are within Brickyard I, and the leachate is considered potentially mobile. Exhibit B, AEI Tech. Support Doc., at Section 4.2.1. Due to sidewall liners and final cover, liquid leachate mobilization is restricted. *Id.* The leachate located in Brickyard I is generated primarily by precipitation infiltration through the cover system. *Id.* at Section 4.2.2. There may also, potentially, be groundwater infiltration from saturated deposits coincident with the sidewall liner west of Brickyard I. *Id.* The physical characteristics are similar to water. *Id.*

Comprehensive leachate analyses have occurred as required by Condition Nos. VII.4 and VII.5 of Brickyard's current permit. *Id.* Brickyard I leachate concentrations were compared to the average concentrations expected for a municipal solid waste disposal facility as listed in Attachment 1 to Appendix C to LPC-PA2.⁹ In most instances, leachate concentrations were significantly less than the values listed in the Attachment. *Id.* A potential release is difficult to confirm given the lower source concentrations. *Id.* 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 wells. *Id.* No current inorganic parameter concentrations indicate a leachate release. *Id.*

The leachate concentrations presented in Attachment 5 to Exhibit B show the presence of some volatile organic parameters, typically in manhole L102. *Id.* at Attachment 5. The

⁹ LPC-PA2 is an IEPA permit application form, with its Appendix C being "Instructions for the Groundwater Protection Evaluation for Putrescible and Chemical Waste Landfills" and Appendix C, Attachment 1 is "Chemical Parameters Associated with Putrescible and Chemical Landfills." Appendix C may be found at: <http://www.epa.state.il.us/land/regulatory-programs/permits-and-management/forms/appendix-c.pdf>.

characteristics of the leachate and the collection and management of the leachate are well documented and discussed in more detail in Exhibit B, AEI Tech. Support Doc., at Section 4.2.

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

The quantity, quality, and direction of flow of groundwater underlying the facility is not subject to further risk, and does not pose further risk, if the adjusted standard is approved. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.3. The water-bearing zone beneath Brickyard I varies, and it is difficult to determine the actual quantity of groundwater for the reasons identified in Section 4.3.1 of Exhibit B, AEI Tech. Support Doc. It is estimated that the approximate gross volume of groundwater present beneath Brickyard I is 45,619,200 gallons. Exhibit B, AEI Tech. Support Doc., at Section 4.3.1.

The quality of the groundwater is classified as Class IV (“Other Groundwater”) groundwater pursuant to Section 620.240(g). *Id.* at Section 4.3.2. Section 620.240(g) states that Other Groundwater is “Groundwater within a previously mined area, unless monitoring demonstrates that the groundwater is capable of consistently meeting the standards of Sections 620.410 or 620.420. If such capability is determined, groundwater within the previously mined area shall not be Class IV.” The mining activities around Brickyard I prohibit the groundwater from meeting the Class I and II quality standards. Exhibit B, AEI Tech. Support Doc., at Section 4.3.2.

The groundwater movement generally occurs from west to east towards the bedrock trough located east of Brickyard I, and due to mechanical disturbance of the bedrock surface east of Brickyard I, the groundwater movement east of Brickyard I varies. *Id.* at Sections 4.3.3 and Section 4.1.2. The groundwater quantity, quality, and direction of flow are discussed in more detail in Exhibit B, AEI Tech. Support Doc., at Section 4.3.

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

Due to the historical land usage on and near Brickyard I, there are no groundwater users or receptors located downgradient. Exhibit B, AEI Tech. Support Doc., at Section 4.4. The adjusted standard will not affect any groundwater users of community water supply wells, non-community water supply wells, or residential wells. *Id.* at Section 4.4.1. No groundwater users would be adversely impacted if the adjusted standard is approved. *Id.*

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

Drinking water supplies are delivered to most consumers and residents in the vicinity of Brickyard I via a public water supply operated by Aqua Illinois. Exhibit B, AEI Tech. Support Doc., at Section 4.5. The other areas not served by Aqua Illinois may attain alternate drinking water from bulk supply (tanks), bottled water, and groundwater from deeper geologic formations. *Id.* There are no potable wells that could be potentially impacted as a result of the requested adjusted standard, so consideration of alternative supplies is not applicable here. *Id.* at Section 4.5.1.

6. Section 814.402(b)(3)(F): The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater.

There will be no impact on the quality of the groundwater if the adjusted standard is approved. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.6. Comprehensive well sampling has occurred around Brickyard I to gauge the groundwater quality, and background considerations greatly affect the results of the sampling and the exceedences discovered, as detailed in Section 4.6 of Exhibit B. Tables 1 through 4 attached to Exhibit B further assist in the understanding of the quality of the groundwater around Brickyard I, the sources of

contamination that are present and changing over time, and the cumulative impacts that are described in more detail in Section 4.6 of Exhibit B. *Id.* The potential sources of contamination at the subject location are the waste unit, the extraneous material areas outside the permitted boundary of the waste unit, and the former coal mining activities. *Id.* at 4.6.1. The proposed adjusted standard will allow for a more effective monitoring of actual conditions. *Id.* Specifically, the adjusted standard will allow for the placement of permanent monitoring wells in an area which will account for these potential sources and any cumulative effects. *Id.* Moreover, the proposed Board Order commits to ensuring appropriate cover on the fill area. *See* Exhibits A and C.

7. Section 814.402(b)(3)(G): Public health, safety, and welfare effects.

As further detailed in Section 4.7 of Exhibit B, there will be no adverse impact to public health, safety, or welfare, but rather, the adjusted standard will allow for greater protection against any potential risk and harm. *See* Exhibit B, AEI Tech. Support Doc., at Section 4.7.8. Section 4.7 of Exhibit B conducts an in depth analysis of the slope stability, mass stability, air quality, groundwater and surface water quality, leachate collection system capacity, cover thickness over the fill area, costs of institutional controls like the cover plan and the removal of extraneous material, and related information. This analysis finds that the temporary groundwater monitor well network can adequately monitor the groundwater quality on the perimeter of both Brickyard I and the extraneous materials to ensure exceedences are discovered and appropriately addressed. *Id.* Also, by leaving the extraneous materials in place, there are no negative effects to the public safety, health, and welfare. *Id.* By removing the extraneous materials, potential negative effects to the public safety, health and welfare can occur. *Id.*

- 8. 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.**

The horizontal extent of the compliance boundary and zone of attenuation is within the Petitioner's property line. Exhibit B, AEI Tech. Support Doc., at Section 4.8 and Figure 6; Exhibit A, Figure 1.¹⁰ Further, the compliance boundary and zone of attenuation do not extend beyond the annual high water mark of any navigable surface water. See Exhibit B, AEI Tech. Support Doc., at Section 4.8. Also, the 100-year flood elevation does not encroach on any well locations anticipated to be part of the monitor well network subsequent to approval of the Petition. *Id.*

- 9. 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.**

The horizontal extent of the compliance boundary and zone of attenuation are within 150 meters from the edge of Brickyard I. Exhibit B, AEI Tech. Support Doc., at Section 4.9 and Figures 6 and 10. Figures 6 and 10 in Exhibit B detail the compliance boundary and zone of attenuation boundaries, which are within the 150 meter range required by subsection 814.402(b)(3)(I). *Id.*

On the basis of the foregoing, the Board should readily conclude that the requested adjusted standard is appropriate pursuant to Section 814.402(b)(3).

IV. NOTICE REQUIREMENTS

The Petitioner will cause a "Notice of Petition by Brickyard Landfill for an Adjusted Standard before the Illinois Pollution Control Board" to be timely published in a newspaper of general circulation in the Danville area, specifically the *Commercial-News*, in accordance with

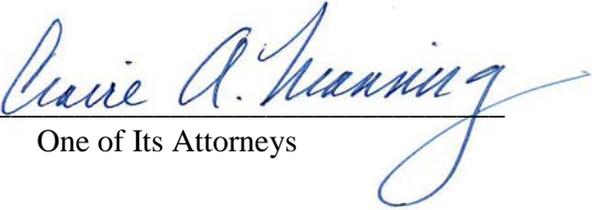
¹⁰ Please note that Figure 1 in Exhibit A is identical to Figure 11 in Exhibit B, AEI Tech. Support Doc.

Section 28.1 of the Act and Section 104.408 of the Board's procedural rules. 415 ILCS 5/28.1;
Section 104.408.

V. CONCLUSION

WHEREFORE, the Petitioner requests that the Board grant an adjusted standard pursuant to Section 28.1 of the Illinois Environmental Protection Act, 415 ILCS 5/28.1, Part 104 of the Board's procedural regulations and Section 814.402(b)(3) of the Board's landfill regulations, as sought herein.

Respectfully submitted,

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EXHIBIT A

SUGGESTED BOARD FINDING

The Board finds that Brickyard I has proven that Section 28.1 of the Act (415 ILCS 5/28.1) and Section 814.402(b)(3) of the Board's rules (35 Ill. Adm. Code 814.402(b)(3)) support granting the adjusted standard. Therefore, the Board determines a zone of attenuation and authorizes an adjustment to the Brickyard I compliance boundary to the limits as shown in the attached Figure 1, dated June 2014.

PROPOSED BOARD ORDER

Brickyard Disposal and Recycling, Inc. is granted 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) for the monitoring network wells relative to Brickyard, Unit I, permit 1981-24-DE, Site Number 1838040029.

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 from the volume resulting from a vertical plane drawn to the bottom of the uppermost aquifer as shown in the attached Figure 1, dated June 2014.

The provisions of 35 Ill. Adm. Code Section 811.318(b)(3) are modified as applied to Brickyard I as follows:

- b) Standards for the Location of Monitoring Points
 - 3) Monitoring wells shall be established as close to the outer edge of either the waste management unit or the extraneous materials, whichever is further out, and within the zone of attenuation downgradient, with respect to groundwater flow, from the source.

The provisions of 35 Ill. Adm. Code Section 811.320(c)(1) are modified as applied to Brickyard I as follows:

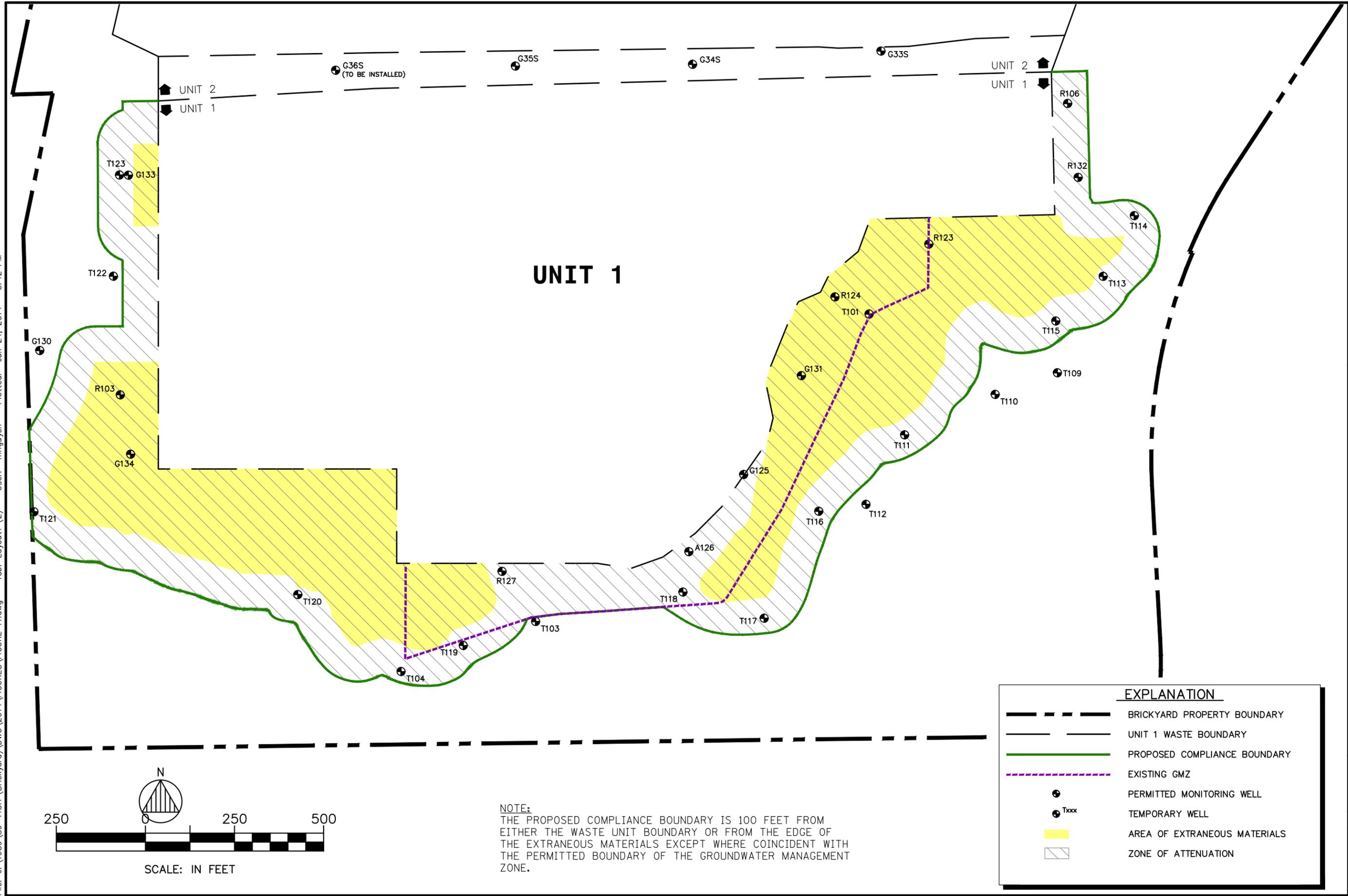
- c) Determination of the Zone of Attenuation
 - 1) The zone of attenuation, within which concentrations of constituents in leachate discharged from the unit may exceed the applicable groundwater quality standard of this Section, is a volume bounded by a vertical plane at the line shown by the green line in the Figure 1, dated June 2014, attached hereto, extending from the

ground surface to the bottom of the uppermost aquifer and excluding the volume occupied by the waste.

This adjusted standard is subject to the following conditions:

1. Within 90 days of the date of this Order, Brickyard shall submit a significant permit modification to the Agency for a groundwater monitoring network for Unit I, consistent with the relief granted herein.
2. 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.
3. 12 months of the date of this Order, Brickyard shall complete placement of additional cover to those areas identified in the Cover Plan, and as otherwise determined necessary during cover placement operations. The Construction Certification Report shall be submitted to the Illinois EPA within 60 days of completion of cover placement.

File: J:\1989\89-115A (Brickyard)\DWG\2014\FIGURES\FIGURE 11.dwg Tab: Layout1 (2) User: mnguyen Plotted: Jun 24, 2014 - 3:42 PM



NOTE:
 THE PROPOSED COMPLIANCE BOUNDARY IS 100 FEET FROM EITHER THE WASTE UNIT BOUNDARY OR FROM THE EDGE OF THE EXTRANEEOUS MATERIALS EXCEPT WHERE COINCIDENT WITH THE PERMITTED BOUNDARY OF THE GROUNDWATER MANAGEMENT ZONE.

EXPLANATION	
	BRICKYARD PROPERTY BOUNDARY
	UNIT 1 WASTE BOUNDARY
	PROPOSED COMPLIANCE BOUNDARY
	EXISTING GMZ
	PERMITTED MONITORING WELL
	TEMPORARY WELL
	AREA OF EXTRANEEOUS MATERIALS
	ZONE OF ATTENUATION

ANDREWS ENGINEERING, INC.
 3300 Ginger Creek Drive, Springfield, IL 62711-7233
 Tel. (217) 787-2334 Fax (217) 787-9495
 Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: B.J.H. DESIGNED BY: B.J.H. DRAWN BY: MPN

PROPOSED COMPLIANCE BOUNDARY AND ZONE OF ATTENUATION
 PLANS PREPARED FOR
 BRICKYARD DISPOSAL & RECYCLING
 DANVILLE, ILLINOIS

DATE: JUNE 2014
 PROJECT ID: 89-115A
 SHEET NUMBER:

FIG. 1

CERTIFICATE OF SERVICE

I, William D. Ingersoll, certify that I have this date served the attached Notice of Filing, Entry of Appearance for Claire A. Manning and William D. Ingersoll and Petition for Adjusted Standard, by means described below, upon the following persons:

To: Pollution Control Board, Attn: Clerk
100 West Randolph Street
James R. Thompson Center, Suite 11-500
Chicago, Illinois 60601-3218
(Via Electronic Filing)

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
(Via First-Class Mail and Email)

Dated: June 27, 2014

BROWN, HAY & STEPHENS, LLP

205 S. Fifth Street, Suite 700
P.O. Box 2459
Springfield, IL 62705-2459
(217) 544-8491

Claire A. Manning
Registration No.: 3124724
cmanning@bhslaw.com

William D. Ingersoll
Registration No.: 6186363
wingersoll@bhslaw.com



By: _____