

ILLINOIS POLLUTION CONTROL BOARD

August 6, 2015

IN THE MATTER OF: )  
)  
PROPOSED AMENDMENTS TO CLEAN ) R12-9 (B)  
CONSTRUCTION OR DEMOLITION ) (Rulemaking - Land)  
DEBRIS FILL OPERATIONS (CCDD): )  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code 1100 )

OPINION AND ORDER OF THE BOARD (by D. Glosser):

On July 29, 2011, the Illinois Environmental Protection Agency (IEPA) filed a proposal pursuant to Sections 22.51 and 22.51a of the Environmental Protection Act (Act) (415 ILCS 5/22.51 and 22.51a (2014)). The proposal amended the Board's rules for Clean Construction or Demolition Debris Fill Operations to allow for use of uncontaminated clean construction or demolition debris (CCDD) and uncontaminated soil to be used as fill at quarries, mines and other excavations. On August 23, 2012, the Board adopted the final rule, making changes recommended by the Joint Committee on Administrative Rules (JCAR) and opened Subdocket B at JCAR's recommendation to further examine the issue of groundwater monitoring at CCDD facilities and uncontaminated soil fill sites.

Today, after reviewing the entire record and considering the additional comments and testimony, the Board remains unconvinced that groundwater monitoring for permitted CCDD and uncontaminated soil fill sites is required for the protection of groundwater. Therefore, the Board closes this docket.

The Board's opinion begins with a discussion of the procedural history followed by the statutory background (page 4). The Board then summarizes the Board's decisions at first and second notice (page 4) and follows with the procedural history of Subdocket B (page 7). The Board summarizes the prehearing public comments (page 7) and then the testimony from hearing (page 24). The Board summarizes post-hearing comments (page 44) before discussing the Board's decision not to proceed with groundwater monitoring requirements (page 62).

**PROCEDURAL HISTORY**

IEPA filed a proposal on July 29, 2011, including a statement of reasons (SR) and a motion to waive filing requirements. IEPA was required by Section 22.51 of the Act to propose rules to the Board by July 30, 2011. 415 ILCS 4/22.51 (2014). The Act required the Board to adopt the rules no later than one year after receipt of IEPA's proposal

On September 26, 2011, a hearing was held in Springfield at which IEPA provided testimony. An additional hearing was held on October 25 and 26, 2011, during which several interested parties as well as IEPA offered testimony. The October 25, 2011 hearing also fulfilled the statutory obligation under Section 27(b) of the Environmental Protection Act (Act) (415

ILCS 5/27(b) (2014)). Section 27(b) of the Act requires the Board to request the Department of Commerce and Economic Opportunity (DCEO) to conduct an economic impact study (EcIS) on certain proposed rules prior to adoption of those rules. If DCEO chooses to conduct the EcIS, DCEO has 30 to 45 days after such request to produce a study of the economic impact of the proposed rules. The Board must then make the EcIS, or DCEO's explanation for not conducting the study, available to the public at least 20 days before a public hearing on the economic impact of the proposed rules. The Board sent DCEO the request on August 4, 2011. On September 28, 2011, DCEO declined to perform an EcIS. The hearing officer sought comment on DCEO's decision not to perform an EcIS.

On February 2, 2012, the Board adopted a first-notice proposal. During the first notice period the Board held an additional two days of hearings on March 13 and 14, 2012. The hearing officer again sought comment on DCEO's decision not to perform an EcIS.

On June 7, 2012, the Board proceeded to second notice and filed the rule with JCAR. JCAR considered the rule at its July 10, 2012 JCAR meeting. At the July 10, 2012 meeting, JCAR requested, and the Board agreed, to extend the second notice period for an additional 45 days. The rule was again considered by JCAR at its August 14, 2012 meeting. At that meeting JCAR issued a recommendation and a certificate of no objection.

At second notice, JCAR recommended that the Board:

give further consideration to whether groundwater monitoring should be required for these facilities. This would give the Board the opportunity to receive further comment from parties who may not have submitted their supportive views when groundwater monitoring was an element of this proposal and who may have opinions and information to offer in light of the Board's decision to remove the requirement before going to 1st Notice on this rulemaking.

On September 21, 2012, a hearing officer order sought comment from any interested person on whether or not the Board should require groundwater monitoring at CCDD and uncontaminated soil fill facilities. The hearing officer allowed for comments to be filed until December 1, 2012. The Board received the following comments:

Pat Metz, Industrial Health Specialist, Office of Public Utilities, City of Springfield, Illinois (PC 48)  
 Illinois Nature Preserves Commission (PC 49)  
 Senator Pat McGuire (PC 50)  
 Representative Tom Cross (PC 51)  
 Representative Lawrence "Larry" M. Walsh, Jr. (PC 52)  
 Representative Emily McAsey (PC 53, 64<sup>1</sup>)  
 Representative Renee Kosel (PC 54)  
 Lawrence M. Walsh, Will County Executive and James G. Moustis, Will County Board Chairman (PC 55)

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<sup>1</sup> PC 53 and PC 64 are identical, but were received separately and both were docketed.

Senator Christine Radogno (PC 56)  
 Marcella M. DeMauro, Executive Director, Forest Preserve District of Will County (PC 57)  
 Land Reclamation & Recycling Association (PC 58)  
 James E. Huff, Huff & Huff, Inc. (PC 59)  
 Citizens Against Ruining the Environment (PC 60)  
 James W. Glasgow, State's Attorney of Will County (PC 61)  
 IEPA (PC 62)  
 People of the State of Illinois (PC 63)  
 Dorothy Hynous (PC 65)  
 Mark J. Krumenacher, PG, of GZA GeoEnvironmental, Inc. (PC 66)

The Board reviewed those comments and found that additional hearings were necessary on the issue of groundwater monitoring. The People of the State of Illinois (People) (Exh. 54), Illinois Association of Aggregate Producers (IAAP) (Exh. 53), and the Board (Exh. 52) prefiled questions for the hearing.

On May 20, 2013, the Board held a hearing in Springfield, Sangamon County. At that hearing the following people testified:

Representative Larry Walsh, Jr.  
 Senator Pat McGuire  
 Will County Executive Larry Walsh, Sr.  
 Stuart Cravens on behalf of Will County (Exh. 55)  
 Martin Hamper a board member for the American Institute of Professional Geologists (Exh. 56)  
 Brian Lansu & Gregory Wilcox on behalf of Land Reclamation & Recycling Association (Exh. 57)  
 James Huff with Huff & Huff, Inc. (Exh. 58)  
 Stephen Sylvester on behalf of the People of the State of Illinois (Exh. 59)  
 Marvin Traylor Illinois Asphalt Pavement Association  
 Bret Hall on behalf of the Illinois Association of Aggregate Producers  
 John Quinn on behalf of the Illinois Association of Aggregate Producers  
 John Henriksen on behalf of the Illinois Association of Aggregate Producers  
 Les Morrow on behalf of IEPA (Exh. 63)  
 Doug Clay on behalf of IEPA (Exh. 63)  
 Chris Liebman on behalf of IEPA (Exh. 63)  
 Richard Cobb on behalf of IEPA (Exh. 63)  
 Terri Blake Myers on behalf of IEPA (Exh. 63)  
 Steve Nightingale on behalf of IEPA (Exh. 63)  
 Thomas Hornshaw on behalf of IEPA (Exh. 63)

On June 12, 2013, the hearing officer entered an order setting forth questions that remained after the hearing and invited comment on those questions. *See* Hearing Officer Order (June 12, 2013). The hearing officer allowed for comments to be filed until August 1, 2013. The Board received the following comments.

VCNA Prairie Inc. by Richard Olsen, President and Michael Pratt General Manager, Aggregate Division (PC 67)  
 Sexton Properties R.P., LLC by Todd Daniels, Director of Operations (PC 68)  
 Illinois Association of Aggregate Producers (PC 69)  
 Land Reclamation & Recycling Association (PC 70)  
 James E. Huff, Huff & Huff, Inc. (PC 71)  
 Will County Land Use Department, Resource Recovery & Energy Division (PC 72)  
 Citizens Against Ruining the Environment (PC 73)  
 IEPA (PC 74)  
 Illinois Department of Transportation (PC 75)  
 Waste Management of Illinois, Inc. (PC 76)  
 People of the State of Illinois (PC 77)

### **STATUTORY BACKGROUND**

Section 22.51(f)(1) provides:

No later than one year after the effective date of this amendatory Act of the 96th General Assembly, the Agency shall propose to the Board, and, no later than one year after the Board's receipt of the Agency's proposal, the Board shall adopt, rules for the use of clean construction or demolition debris and uncontaminated soil as fill material at clean construction or demolition debris fill operations. The rules must include standards and procedures necessary to protect groundwater, which may include, but shall not be limited to, the following: requirements regarding testing and certification of soil used as fill material, surface water runoff, liners or other protective barriers, monitoring (including, but not limited to, groundwater monitoring), corrective action, recordkeeping, reporting, closure and post-closure care, financial assurance, post-closure land use controls, location standards, and the modification of existing permits to conform to the requirements of this Act and Board rules. The rules may also include limits on the use of recyclable concrete and asphalt as fill material at clean construction or demolition debris fill operations, taking into account factors such as technical feasibility, economic reasonableness, and the availability of markets for such materials. 415 ILCS 5/22.51(f)(1) (2014).

Section 22.51a(d)(1) further provides:

No later than one year after the effective date of this amendatory Act of the 96th General Assembly, the Agency shall propose to the Board, and, no later than one year after the Board's receipt of the Agency's proposal, the Board shall adopt, rules for the use of uncontaminated soil as fill material at uncontaminated soil fill operations. The rules must include standards and procedures necessary to protect groundwater, which shall include, but shall not be limited to, testing and certification of soil used as fill material and requirements for recordkeeping. 415 ILCS 5/22.51a(d)(1) (2014).

## **SUMMARY OF BOARD'S DECISION NOT TO REQUIRE GROUNDWATER MONITORING**

### **First Notice**

The Board expressed that its first concern is that CCDD and uncontaminated soils that will be deposited into quarries, mines, and other excavations, be clean and uncontaminated as those terms are defined by the rules and the statute. The Board noted that if the regulations provide assurances that the materials being deposited are indeed clean and uncontaminated and the regulations are adhered to, protection will be provided to public health and the environment, including groundwater. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 54 (Feb. 2, 2012).

The Board noted that the record did not include evidence to demonstrate that CCDD or uncontaminated soil sites are a source of groundwater contamination. Further, the record indicated that requiring groundwater monitoring would impose potentially sizeable costs that may have adverse impacts on fill operations. CCDD and uncontaminated soils are not classified as wastes, so do not require the stringent rules that exist for nonhazardous waste landfills. Therefore, the Board found that this record does not support groundwater monitoring. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 57 (Feb. 2, 2012).

The Board further noted that P.A. 96-1416<sup>2</sup> (eff. July 30, 2010) requires the Board to adopt rules to include “standards and procedures necessary to protect groundwater, which may include, but shall not be limited to” a list of twelve possible procedures or tools. One of these is “monitoring (including, but not limited to groundwater monitoring)”. The Board found that, while groundwater protection is a legislative priority, this protection can be achieved without requiring groundwater monitoring. The Board’s first-notice proposal strengthened the front-end screening process for soils and other provisions to help ensure that the soils legally deposited in quarries, mines, and other excavations are uncontaminated. Therefore, the Board found that its proposal will protect groundwater. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 57 (Feb. 2, 2012).

As a result of these concerns and other provisions included to protect groundwater, the Board deleted Subpart G of IEPA’s proposal, standards for groundwater monitoring. The Board also deleted several definitions pertaining to groundwater monitoring, and references to Subpart G in other parts of the proposed rules. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 57 (Feb. 2, 2012).

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<sup>2</sup> P.A. 96-1416 added Sections 22.51 and 22.51a to the Act (415 ILCS 5/22.51 and 22.51a (2014))

## Second Notice

During first notice, several participants questioned the Board's decision not to proceed with groundwater monitoring and expressed concerns that not including groundwater monitoring is contrary to legislative intent, and will result in groundwater not being protected. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 82 (June 7, 2012). Further, IEPA and the People argued that evidence of groundwater contamination is not required for the Board to include groundwater monitoring. In addition, participants provided information on the cost of groundwater monitoring. *Id.*

The Board examined the legislative intent and noted:

The Board has reviewed the statutory language and the arguments presented by the participants. The Board remains convinced that the statutory language of Section 22.51, while requiring the Board to adopt rules to protect groundwater, does not require groundwater monitoring. Thus, the Board will continue to proceed with a rule that protects groundwater, but does not require the monitoring.

Furthermore, the language of the statute provides options for groundwater protection only one of which is groundwater monitoring and that was only for CCDD operations. Those options include testing and certification of soil used as fill material, surface water runoff, liners or other protective barriers, monitoring (including, but not limited to, groundwater monitoring), corrective action, recordkeeping, reporting, closure and post-closure care, financial assurance, post-closure land use controls, and location standards. In the case of uncontaminated soil fill operations, the statute specifically lists the options of testing and certification of soil used as fill material and requirements for recordkeeping. The Board's rules address several options highlighted in the statutes, including, testing and certification of soils to be deposited in CCDD and uncontaminated soil fill operations, surface water control, recordkeeping and reporting, and closure and postclosure care. Also, the rules define uncontaminated soil such that [maximum allowable concentrations] (MACs) will not be exceeded in soils. Clearly, the rule will protect groundwater. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 84 (June 7, 2012).

The Board also found that groundwater will be protected given requirements for soil certification and load inspection. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 84-88 (June 7, 2012).

In summary, the Board found that the statutory directive to protect groundwater does not equate to requiring groundwater monitoring. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100,

R12-9, slip op. at 89 (June 7, 2012). The Board continued that “[w]ith strengthened soil certification and testing and recordkeeping, groundwater will be protected from contamination under the Board’s rules.” *Id.* Based on the record, the Board found that groundwater monitoring is not required and the Board did not restore Subpart G, groundwater monitoring, to the rule. *Id.*

### **SUBDOCKET B PROCEDURES**

The Board accepted JCAR’s recommendation to give groundwater monitoring further consideration, and directed the Clerk to open a Subdocket B in this proceeding. The subdocket includes all the comments, testimony, and filings in the docket. On September 20, 2012, the Board issued an order in Subdocket B, detailing the Board’s procedures in that subdocket. The Board sought input from participants on several areas, including additional information that could convince the Board that its decision was in error. Of particular concern was the lack of evidence in this record demonstrating that either CCDD or uncontaminated soil fill operations, when properly run, will impact groundwater.

The Board asked for commenters to address what parameters groundwater should be tested for as well as the impact of nondegradation requirements. The Board sought comment on the design and implementation of groundwater monitoring and whether IEPA can require groundwater monitoring at uncontaminated soil fill sites. Finally, the Board asked for information on issues of self-implementation, financial assurance, and whether pre-screening is required along with groundwater monitoring.

### **PREHEARING PUBLIC COMMENTS**

In response to the Board’s September 20, 2012 order the Board received several comments. The Board will summarize each of those comments below.

#### **Pat Metz, City Water, Light and Power (PC 48)**

Pat Metz, an employee of City Water, Light and Power (CWLP) for the City of Springfield, expressed his agreement with the Board’s decision to remove the groundwater monitoring requirements from the IEPA’s proposal. PC 48 at 1. Mr. Metz opposed further impositions to the Part 1100 rules and contended that groundwater monitoring is not necessary. *Id.* Mr. Metz argued that while groundwater monitoring wells can provide a warning of potential contamination, the advantage of this information does not outweigh the cost of such system at each of the permitted fill sites. *Id.* He further reasoned that the implementation of the groundwater monitoring system could potentially force operators out of business, require them to increase cost to their customers, or oblige them to take their non-contaminated excavated material to a landfill. *Id.* He believes that such restrictive regulatory pressure would also result in CCDD material being disposed illegally, thus negating the purpose of the rule. *Id.*

Mr. Metz also expressed his concern with the amendments to Part 1100, effective on August 27, 2012, and adopted in Proposed Amendments to Clean Construction or Demolition Debris (CCDD) Fill Operations: Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9 (Aug. 23, 2012). *Id.* at 2. He argued that the DCEO should have estimated the economic impact of the

proposed regulations. *Id.* He hopes that the Board will evaluate the cost of installing, maintaining, and sampling groundwater monitoring wells as it considers additional revisions to the CCDD rules. *Id.*

### **Jenny Skufca, Illinois Nature Preserves Commission (PC 49)**

Jenny Skufca, a Natural Areas Defense Specialist, commented on behalf of the Illinois Nature Preserves Commission (INPC), which is charged with the protection of the State's highest quality natural areas under the Illinois Natural Areas Preservation Act (525 ILCS 30/1 *et. seq.* (2014)). PC 49 at 1. The Illinois Groundwater Protection Act (415 ILCS 55/1 *et. seq.* (2014)) (GPAct) affords areas designated as Illinois Nature Preserves additional protection to their groundwater contribution areas through a request for Class III: Special Resource Groundwater Delineation pursuant to 35 Ill. Adm. Code 620.23 0(b). *Id.*

Ms. Skufca expressed INPC's concern with CCDDs that lie within the delineated Class III groundwater contribution areas of a Nature Preserve, or areas that qualify but have not yet completed the delineation process. *Id.* at 2. She urged the Board to enforce a groundwater monitoring requirement in instances where CCDD will be used as fill within the boundary of a Class III area and within one-mile radius of a Nature Preserve with no Class III delineation. *Id.* Ms. Skufca also recommended that an evaluation of groundwater flow direction be required to discern whether any potential contamination could impact a vulnerable groundwater contribution area. *Id.* She concluded by asking the Board to consider the hydrologic vulnerability and hydraulic connectivity to Illinois Nature Preserves when deliberating whether additional CCDD groundwater monitoring impositions should be implemented. *Id.*

### **Senator Pat McGuire (PC 50)**

Senator Pat McGuire requested that the Board amend Part 1100 adopted by the Board in R12-9 on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 50 at 1. He argued that the installation of groundwater monitoring systems would provide the necessary checks and balances to ensure that local community water supplies are protected from contamination. *Id.* Senator McGuire referenced Public Act 96-1416 (eff. July 30, 2010), which provides statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* In addition, the Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* The Senator contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.* He urged the Board to amend the existing CCDD rules to include groundwater protections. *Id.*

### **Representative Tom Cross (PC 51)**

Representative Tom Cross requested that the Board amend Part 1100 adopted by the Board in R12-9 on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 51 at 1. He argued that the installation of groundwater monitoring systems would provide the necessary checks and balances to ensure that local community water supplies are protected from contamination. *Id.* Representative Cross referenced Public Act 96-1416, which provides

statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* In addition, the Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* Representative Cross contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.* Thus, he urged the Board to amend the existing CCDD rules to include groundwater protections. *Id.*

#### **Representative Lawrence M. Walsh Jr. (PC 52)**

Representative Lawrence M. Walsh Jr., a state representative for the 86th district, requested that the Board amend Part 1100 adopted by the Board in R12-9 on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 52 at 1. He argued that the installation of groundwater monitoring systems would provide the necessary checks and balances to ensure that local community water supplies are protected from contamination. *Id.* Representative Walsh referenced Public Act 96-1416, which provides statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* In addition, the Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* Representative Walsh contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.* He also believes that ample data and evidence has been presented by the IEPA, Will County, and other respondents to demonstrate that groundwater monitoring costs are reasonable and not excessive. *Id.* Thus, Representative Walsh urged the Board to amend the existing CCDD rules to include groundwater protections. *Id.*

#### **Representative Emily McAsey (PC 53 and 64)**

Representative Emily McAsey, a state representative for the 85th district, requested that the Board amend Part 1100 adopted by the Board in R12-9 on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 53 at 1. She argued that the installation of groundwater monitoring systems would provide the necessary checks and balances to ensure that local community water supplies are protected from contamination. *Id.* Representative McAsey referenced Public Act 96-1416, which provides statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* In addition, the Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* Representative McAsey contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.* Thus, she urged the Board to amend the existing CCDD rules to include groundwater protections. *Id.*

#### **Representative Renee Kosel (PC 54)**

Representative Renee Kosel, an Illinois State Representative, requested the Board amend the CCDD rules adopted by the Board on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 54 at 1. She argued that the installation of groundwater monitoring systems would provide the necessary checks and balances to ensure that local community water supplies are protected from contamination. *Id.* Representative Kosel referenced Public Act 96-1416,

which provides statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* In addition, the Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* Representative Kosel contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.* Thus, she urged the Board to amend the existing CCDD rules to include groundwater protections. *Id.*

**James G. Moustis, Will County Board Chairman / Lawrence M. Walsh, Will County Executive (PC 55)**

Lawrence M. Walsh, Will County Executive, and James G. Moustis, the Will County Board Chairman, commented on behalf of Will County. PC 55 at 1. They expressed the apprehension that the county has regarding contamination that might affect their groundwater supply. *Id.* Specifically, they raised the concern that there are not adequate testing requirements that protect the water supplies from the contamination of material disposed at CCDD and uncontaminated soil fill sites. *Id.* Mr. Walsh and Mr. Moustis contended that groundwater monitoring would ensure that facility operators are following regulations and accepting the right materials. *Id.* They also believe that such monitoring would curtail future liability. *Id.*

Mr. Walsh and Mr. Moustis also discussed Will County's effort to assist the Board and JCAR in their evaluation of the costs associated with the implementation of groundwater monitoring program. *Id.* They discussed the findings of Michael Crutcher, an engineer and hydrogeologist, who was hired by Will County to perform a study to determine the costs of groundwater monitoring at CCDD sites. *Id.* Mr. Crutcher's evaluation revealed that the total estimated cost to create and install an overall groundwater monitoring network and program of five wells would be \$156,300. *Id.* The annual operation cost of the wells in current years for sampling, including analyzing and filing a report for the groundwater data, is \$18,700 for five wells. *Id.*

When calculating this cost analysis, the amount was increased by 3% (average Consumer Price Index) per year. *Id.* The number of years of operation and the estimated capacity were then used to provide a breakdown per cubic yard. *Id.* The cost of the work as outlined above was applied to four CCDD sites in Will County using information the subject sites provided to the IEPA as part of their permit. *Id.* at 2. The cost for these sites with a site capacity ranging in age from 3 years (1,363,786 cubic yards) is \$0.16 per cubic yard to 33 years (23,000,000 cubic yards) is \$0.06 per cubic yard. *Id.* The CCDD sites generally charge between \$4.50 and \$5.00 per cubic yard for materials brought to the site. *Id.* Mr. Walsh and Mr. Moustis concluded by stating that it appears that once broken down to the cubic yard, as opposed to looking at the entire cost of implementing a groundwater program for the site's life, the cost of a groundwater program is a fraction of what the site charges per cubic yard. *Id.*

Mr. Walsh and Mr. Moustis asked the Board to consider adding groundwater monitoring requirements at CCDD sites given the additional information provided by Will County's expert. *Id.* They contended that for a low cost of \$0.06 to \$0.16 per cubic yard of CCDD materials deposited, groundwater monitoring can be implemented, which would ensure that Will County and other residents throughout the State have a clean water source. *Id.*

**Senator Christine Radogno (PC 56)**

Senator Christine Radogno requested that the Board amend Part 1100 adopted by the Board in R12-9 on August 23, 2012 to include groundwater monitoring at CCDD sites. PC 56 at 1. Senator Radogno referenced Public Act 96-1416, which provides statutory language that governs how CCDD sites are regulated and monitored in Illinois. *Id.* The Act specifically states that CCDD rules must include standards and procedures necessary to protect groundwater. *Id.* Senator Radogno contended that the exclusion of groundwater monitoring requirements in rules adopted by the Board on August 23rd is contrary to what the legislature had intended when drafting the bill. *Id.*

**Marcella M. DeMauro, Executive Director of the Forest Preserve District of Will County (PC 57)**

Ms. DeMauro commented on behalf of the Forest Preserve District of Will County, Forest Preserve Board of Commissioners (Commissioners). PC at 57. Ms. DeMauro stated that the Commissioners believe that sufficient safeguards are needed to protect groundwater resources. *Id.* She pointed out that most Will County communities rely on groundwater as a potable water source and many abandoned quarries or other potentially suitable fill sites are near forest preserves that protect environmentally sensitive wildlife and habitats. *Id.* Ms. De Mauro argued that without adequate testing, there is no way to insure that facility operators are following the new regulations in accepting suitable materials for disposal at CCDD and uncontaminated soil fill sites. *Id.* Thus, a risk of groundwater contamination can develop, which can pose a health risk to Will County residents. *Id.*

Ms. DeMauro also discussed the analysis conducted by Will County that demonstrated the cost would be between \$0.06 to \$0.16 per cubic yard to implement the groundwater monitoring program. *Id.* at 2. She contends that this is a small cost relative to the benefit of ensuring clean and safe drinking water supply for Will County residents. *Id.* Ms. DeMauro concluded by urging the Board to implement groundwater monitoring requirements at CCDD and uncontaminated soil fill sites. *Id.*

**Land Reclamation & Recycling Association (PC 58)**

Land Reclamation & Recycling Association (LRRRA) noted that it had provided testimony (Exh. 15) regarding costs associated with developing groundwater monitoring models and installing groundwater monitoring wells at the Reliable Materials Lyons, LLC CCDD site (Reliable Lyons). PC 58 at 1. LRRRA concurred with IAAP and other interested parties that groundwater monitoring is unnecessary for CCDD facilities to ensure protection of the environment. *Id.*

LRRRA provided additional information on monitoring of groundwater at Reliable Lyons. LRRRA explained that in 2008 the Village of Lyons entered the Site Remediation Program (SRP) with property that is directly east of the Reliable Lyons site. PC 58 at 1. Both prior to and during construction on the Lyons' property, stormwater runoff flowed into the CCDD site at

Reliable Lyons. *Id.* Reliable Lyons installed a groundwater collection system at the bottom of the 275-foot deep limestone quarry that included an inward gradient and a pump. The collected groundwater is pumped and discharged to the Des Plaines River under a National Pollutant Discharge Elimination System (NPDES) permit. *Id.*

Beginning in 2007, Reliable Lyons randomly tested the water discharged for Resource Conservation Recovery Act (RCRA) metals, polycyclic aromatic hydrocarbons (PAH), semi-volatile organic compounds (SVOC), pesticides, and herbicides. PC 58 at 1. LRRRA stated that this testing was performed because of concerns that the Lyons' property could leach contaminants into Reliable Lyons. *Id.* LRRRA indicated that in the first year of testing Reliable Lyons accepted approximately 1,300,000 cubic yards of CCDD, and that was during a time when the amendments to Part 1100 had not been adopted. PC 58 at 2. The results of the first year of testing detected only barium and that was at a level well within the standard for potable groundwater. *Id.*

Reliable Lyons conducted testing in 2007, 2008, 2009, and 2010, collecting five samples during a period of unrestricted drainage from the Lyons' property. PC 58 at 2. The results of this testing demonstrated that barium continues to be within the normal range for Illinois soils, and the levels of lead, chromium, selenium, and naphthalene were well below Class I groundwater standards. *Id.* at 3. LRRRA noted that other than selenium, all of the constituents were found as a part of testing from the Lyons' property. *Id.* Since 2010, Reliable Lyons collected seven additional samples and only barium was detected. *Id.*

LRRRA concluded:

The Reliable [Lyons] CCDD site, which is one of the largest permitted CCDD facilities in the state of Illinois, has accepted over 6,000,000 [cubic yards] of CCDD since 2006. The vast majority of this material has come from highly developed urban environments. Yet, the data from groundwater well samples indicates that there is no evidence of contamination of local groundwater as a result of the fill operation. This information supports the Board's initial determination that there is no justification for imposing groundwater well installation and monitoring as an environmental safeguard against contamination at CCDD sites within the state of Illinois. PC 58 at 3-4.

**James E. Huff, Huff & Huff, Inc. (PC 59)**

James E. Huff submitted comments to address the issue of what requirements should be imposed at CCDD fill operations if the Board determined it necessary to require groundwater monitoring. Mr. Huff also addressed two issues that he requested be re-visited in this subdocket: the maximum soil pH and the decision not to incorporate MACs under the Board's regulations. PC 59 at 1.

Mr. Huff asserted that "protecting groundwater is important to all stakeholders", although he suggested that this can be done by regulating the quality of CCDD materials as well as requiring groundwater monitoring. PC 59 at 2. Mr. Huff suggested that a key issue to examine

in this subdocket is the “economic implications of requiring monitoring wells”, which includes the cost of monitoring but also whether “fill operations will even proceed with putting in the monitoring wells”. He expressed concern that many fill operations will exit the CCDD and uncontaminated soil markets, which will force these clean materials to be deposited in landfills “at a huge economic burden on the citizens of Illinois”. *Id.*

According to Mr. Huff, there are two costs associated with groundwater monitoring. PC 59 at 2. The first is the capital and operating costs, and the second is the unknown costs should a contaminant above regulatory limits be found. He suggested that while the first cost can be significant, it is a known cost, and fill owners can make a business decision based on these costs. The second cost is “totally unknown and uncontrollable and clearly the largest concern to the industry”. *Id.* The concern, Mr. Huff argued, is that the groundwater monitoring would detect not only the impacts of fill operations but also historic impacts. If impacts were found, he stated, the remediation approaches would be to either begin a pump and treat system that could go on indefinitely, or to attempt to secure a groundwater management zone for the area. *Id.*

Mr. Huff opined that IEPA has interpreted Section 620.301, a part of the Board’s nondegradation rules, to mean “achieving background concentrations, as opposed to creating *an existing or potential use* impairment, which is what Section 620.301(a)(2) states.” PC 59 at 3 (emphasis in the original). He argued that the CCDD industry would be subject to “a more stringent remedial standard than LUST, RCRA, and voluntary (Site Remediation) programs”. Mr. Huff contended that all of these programs “manage chemicals with the same or greater potential hazards than the CCDD material under consideration”. *Id.*

Mr. Huff provided two recommendations for the Board to consider if the Board elects to require groundwater monitoring. PC 59 at 3(emphasis in the original). First, he recommended limiting groundwater monitoring to volatile organic compounds and dissolved RCRA metals. Mr. Huff opined that this would eliminate much of the monitoring cost burden and focus on the contaminants of the most concern. Dissolved metals rather than total metals are important to avoid false readings. Also, Mr. Huff offered that volatile organics are the most mobile contaminants and the most commonly found in groundwater. *Id.* Second, Mr. Huff recommended eliminating “any reference to non-degradation requirements and specifically allow the use of groundwater use restrictions as provided for in 35 Ill Adm. Code 742”. *Id.* at 4. Mr. Huff noted that the proposed CCDD regulations have “borrowed heavily from the TACO regulations”, so there “is no reason that the fill operations could not be afforded the same ability to secure a groundwater use restriction”. *Id.*

Mr. Huff raised an issue with the Board adopting a maximum pH of 9.0, which he claims has created a number of problems, and recommended that the restriction on uncontaminated soil with a pH of greater than 9.0 be eliminated. PC 59 at 4 and 5. Aggregate limestone that is used underneath highways and buildings can have a pH of as high as 12.45. Mr. Huff argues that the “soil pH limit does not apply to the CCDD material, although where CCDD material and uncontaminated soil are co-mingled, then the pH limit would apply. *Id.* at 4. He stated that he had seen loads of aggregate material with minimal uncontaminated soil rejected where the pH values were greater than 9.0. *Id.* Mr. Huff continued by noting “much of the native soil in northeastern Illinois is derived from glacial deposits”, which are derived from limestone and

dolomitic bedrock”. *Id.* at 5. He stated that it is “not uncommon to have naturally occurring soils derived from these parent materials to exceed a pH of 9.0”. As a result, Mr. Huff opined that there “is really no technical basis for the upper pH limit for uncontaminated soil, as metal mobility is not affected by higher pH levels”. *Id.*

Mr. Huff raised a second issue to be revisited in this subdocket. He asked the Board to codify the “maximum allowable concentrations in the regulations”. PC 59 at 5. Mr. Huff expressed concern that only the minimum pH was vetted, while IEPA was relied on to establish the MACs based on TACO. He noted that IEPA “has set MAC limits for iron and manganese at the median concentration in the state of Illinois”, which he identifies as a problem. *Id.* Mr. Huff presented a second example of how IEPA, without any discussion outside of IEPA, established a total chromium MAC based on the hexavalent chromium. *Id.* at 6. Mr. Huff argued that he did not recall ever detecting hexavalent chromium in uncontaminated soils in Illinois. Mr. Huff concluded by noting that due to this MAC, “somewhere less than half of all soil in the metropolitan areas of Illinois will fail the total chromium MAC based on these results”. As a result of these concerns, Mr. Huff recommended that the “current docket be expanded to vet the MACs and bring these limits under Part 1100 regulations”. *Id.* at 7.

### **Citizens Against Ruining the Environment (PC 60)**

Citizens Against Ruining the Environment (CARE), most of whose members live in Will County, observed that most Will County residents rely on groundwaters as their source of public and private water supplies. As a result, CARE urged the Board to “mandate groundwater monitoring at CCDD sites to ensure that aggregated fill material does not affect vital groundwater resources now or in the future”. PC 60 at 1. This is consistent with CARE’s position that “proactive groundwater monitoring is appropriate”. *Id.*

CARE offered three reasons to require groundwater monitoring. PC 60 at 1. First, there could be an “aggregation of material that cumulatively affects groundwater quality over time”, even for sites that are in compliance. CARE claims this is particularly true because these sites are not required to have liners. *Id.* at 2. Second, “it is the unconditional mandate of the Illinois Legislature that groundwater must be protected”. CARE noted that the Illinois Groundwater Protection Act, “mandates a preventive approach” to protecting groundwater. *Id.*

The third reason CARE asserted that groundwater monitoring should be required is that “there is ample evidence in Illinois that ‘perfect compliance’ will not be achieved by CCDD generators and the sites that accept this material for disposal”. PC 60 at 2. CARE demonstrated this point by conducting a ten-year survey of completed enforcement cases against CCDD generators and disposal sites, where it identified “more than 150 administrative and judicial enforcement cases”. *Id.* CARE contended that this compliance survey provides evidence that demonstrates it is naïve to believe that “only ‘properly run’ facilities will operate” in the future. Given these documented violations, CARE questioned the Board as to why it believes “that establishing new regulations will magically transform the actors in this industry into perfectly compliant operators”. CARE requested that the Board pay particular attention to three cases that were decided by the Board either immediately before or during this rulemaking. PC 60 at 3. These cases are People v. Western Sand & Gravel Co., LLC, PCB 10-22 (Mar. 18, 2010), People

v. Reliable Materials LLC, PCB 12-52 (Aug. 21, 2014), and the People v. 87th & Greenwood, LLC, PCB 10-71 (June 9, 2011). *Id.* at 3, 4, 5, 6.

CARE concluded by asserting the Board is not framing the question of whether groundwater monitoring should be required correctly. PC 60 at 6. It is not appropriate to ask for evidence as to whether groundwater contamination has occurred from “properly run facilities”. CARE cited testimony by IEPA’s Rick Cobb who articulated the “larger point is because of imperfect certification and screening procedures”. *Id.* CARE reiterated its position that the Board should “accept the [I]EPA’s prudent, preventative approach, an approach which is endorsed by the Illinois Attorney General and Will County government officials”. *Id.* CARE argues further that IEPA’s “concern is not merely speculative, but is justified by a well-documented history of non-compliance and enforcement”. *Id.* at 7.

### **James W. Glasgow, State’s Attorney of Will County (PC 61)**

James W. Glasgow, the State’s Attorney of Will County, submitted comments to the Board on the issue of groundwater monitoring. PC 61 at 1. Mr. Glasgow noted that the Board failed to include a groundwater monitoring requirement in Part 1100, citing three principle reasons: the costs of such monitoring, the lack of evidence in the record to support this requirement, and that CCDD and uncontaminated soils are not classified as wastes. *Id.*

Mr. Glasgow presented evidence to suggest the cost of groundwater monitoring is “incidental in comparison to the savings of dumping CCDD waste in an unlined quarry”. PC 61 at 1. He elaborated by citing figures from the record to support his argument, including testimony by Mr. John Hock, P.E. who stated that the cost of sampling groundwater monitoring wells for the entire Class I list “is a mere \$2,996 per sample”, and that testimony from Mr. Ken Liss (Exh. 49) who reported the total cost of sampling is less than \$12,000 per year. *Id.* at 2. Mr. Glasgow opines that in comparison to the cost of groundwater monitoring, the “cost of contamination is devastating”. *Id.*

Regarding the second reason the Board failed to require groundwater monitoring, Mr. Glasgow noted that while the record lacks evidence that CCDD or uncontaminated soils are a source of contamination, this is only true because data from these facilities are “virtually nonexistent”. PC 61 at 2. However, Mr. Glasgow noted testimony by the People (Exh. 35) that cited eleven cases being filed against CCDD facilities for not following CCDD regulations. He also argued that “we know that for every violator caught hundreds escape detection”. *Id.* Further, Mr. Glasgow opined that evidence of contamination is not a pre-requisite for taking steps to protect groundwater; in fact, it is a mandate in the Illinois Constitution, as well as being identified as essential by the Illinois legislature with passage of the Act and Groundwater Protection Act. *Id.* at 3 and 4. Mr. Glasgow stated that by failing to include a groundwater monitoring requirement, the Board has failed to give IEPA “the tools necessary to detect contamination early enough to prevent catastrophic damage and to establish the causation of the contamination”. *Id.* at 4.

Mr. Glasgow concluded by arguing that Part 1100, as adopted by the Board, “assume[s] that all testing procedures are perfect, that all operators and employees of sites are well-trained,

that all owners/operators and users of CCDD sites have the best intentions”. PC 61 at 5. He opined that this view is “dangerously naïve and places the citizens and the groundwater supply in peril”. *Id.*

### **Illinois Environmental Protection Agency (PC 62)**

IEPA submitted comments to the Board in support of groundwater monitoring as included in Subpart G of its initial proposal. PC 62 at 2. Influencing IEPA’s decision to propose groundwater monitoring is the “statutory command to propose and adopt standards and procedures necessary to protect groundwater”, which indicates the legislature has “concluded that there is potential for groundwater contamination from facilities accepting large quantities of soil from nearly unlimited sources and locations”. *Id.* IEPA argued that the question is not whether there is evidence of such contamination as the Board suggested, but “rather how groundwater protection will be accomplished considering the potential for such contamination”. IEPA stated that it does agree with the Board that “groundwater monitoring is not specifically required by statute”. Groundwater monitoring is, however, “the single most important measure for achieving groundwater protection”, according to IEPA. *Id.*

### **Multi-Barrier Approach**

IEPA explained that its initial proposal used a multi-barrier approach for fill operations accepting soil, which included setting numeric standards for MACs, requiring soil certification and screening, and groundwater monitoring for fill operations. PC 62 at 2 and 3. IEPA stated that it proposed groundwater monitoring “as a final check on control practices, and in part because the [IEPA] did not believe time-consuming and costly regulatory burdens should be placed on construction and demolition activities”. IEPA believed the costs should be the responsibility of fill operations as the regulated entities, with the costs being allocated proportionately among all source site owners and operators through adjusted tipping fees. *Id.* at 4.

IEPA opined that groundwater monitoring is the “single most important protective barrier” in its initial proposal because “certification and screen procedures were of limited effectiveness”. PC 62 at 5. Groundwater monitoring would serve as an “early warning of any groundwater contamination that might result from the quantities of soil deposited in unlined quarries, mines or other excavations”. *Id.*

### **Evidence of Contamination**

IEPA asserted that the absence of evidence of groundwater contamination does not support a decision that groundwater monitoring is unnecessary. PC 62 at 7. First, the lack of evidence of such contamination from fill operations is not proof that these facilities cannot or have not caused groundwater contamination, and second, there is no evidence because “no one is looking for it”. There is no current groundwater monitoring requirement so there is no systematic approach to answer the question. IEPA further stated that “the question is not whether such contamination is “likely” but whether the potential for groundwater contamination exists at fill operations”. *Id.* Requiring evidence of such contamination before groundwater

monitoring is implemented “establishes a threshold for groundwater monitoring that cannot be met” unless groundwater contamination is widespread and serious. *Id.* IEPA opined that “the potential for fill operations to cause groundwater contamination is a sufficient basis for the Board to require groundwater monitoring”. *Id.* at 8.

According to IEPA there are five secondary factors to support groundwater monitoring:

- 1) Imperfect certification procedures and limitations of the tools available to site owners/ operators;
- 2) The large quantities of soil accepted at many facilities;
- 3) The frequent placement of soil in the saturated zone;
- 4) The absence of design controls such as liners; and
- 5) The impracticality of installing or retrofitting design controls in former quarry operations. PC 62 at 8.

In addition are the possible consequences if groundwater contamination is not prevented, which are potentially severe and costly. *Id.* at 8 and 9. IEPA asserted, however, that it is not suggesting that specific fill operations are now or will become sources of groundwater contamination. *Id.* at 9. IEPA pointed out that CCDD and uncontaminated soil should be considered to have the potential to cause such contamination and because the State’s policy is to prevent groundwater contamination, groundwater monitoring should be required at fill operations. *Id.*

IEPA reminded that the Board acknowledged that policy considerations such as the protection of groundwater may be sufficient authority for adopting a rule, but it declined to do so in this proceeding. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 87-8 (June 7, 2012). IEPA makes clear that its argument has been that the potential for groundwater contamination from fill operations exists even if the rules are followed. PC 62 at 10. However, IEPA argued that the likelihood that the rules will not be followed in all cases and at all times supports a requirement for groundwater monitoring. *Id.* IEPA maintained that the due diligence procedures and assessing impacts based on the guidance documents referenced in Part 1100 “is not a simple task nor will it further the source site owner/operators’ direct interests.” *Id.* IEPA argues:

For all source site owner/operators to achieve a high level of accuracy using the Board's procedures will require familiarity with complex legal, environmental and technical concepts, knowledge of legal, real estate and environmental databases and the proficiency with computers to search them, diligence in the performance of the assessment (e.g., willingness to invest the time and money necessary to track down and resolve uncertain details), and motivation to reach a complete and

accurate result (e.g., appreciation for the possible consequences of inaccuracy).  
*Id.* at 10-11.

IEPA stated it assumes most source site owner/operators will make a good faith effort to comply, but IEPA does not assume that the evaluations required by the Board will be perfectly performed or that soils contaminated above the MACs will never enter fill operations. *Id.* at 11.

IEPA argued that the Board rejected an approach in Groundwater Protection: Regulations of Existing and New Activities Within Setback Zones and Regulated Recharge Areas; Groundwater Technical Standards: 35 Ill. Adm. Code 601, 615, 616, and 617, R89-5 (Dec. 6, 1991)) that was similar to what the Board now adopted in Part 1100. PC 62 at 14. In the R89-5 final opinion, IEPA noted, the Board “repeatedly mentioned the potential for contamination from the regulated sources and the preventive nature of the rules it was promulgating”. *Id.* IEPA further noted that the Board did adopt groundwater monitoring for most of the potential sources, including pesticides and fertilizers. *Id.*

### **Costs of Groundwater Monitoring**

IEPA next addressed the issue of the costs associated with groundwater monitoring. IEPA identified two perspectives from which to consider such costs, first, the actual monitoring costs, and second, the potential costs of not monitoring. PC 62 at 17. IEPA prepared estimated costs for groundwater monitoring that include these basic elements: investigation, site monitoring well placement, groundwater sampling program design, and monitoring data evaluation. *Id.* at 21. IEPA also obtained cost estimates for the development of a groundwater monitoring system plan for CCDD fill operations. Costs for such plans ranged from \$5,000 to \$18,000. IEPA did not include cost estimates for groundwater monitoring at uncontaminated soil fill operations because it has no data on the quantity of soil accepted at these facilities. *Id.* at 22.

According to IEPA, the combined costs of a monitoring well system design and well installation at CCDD fill operations would be less than \$0.12 per cubic yard over a ten year life of the permit for 96% of the CCDD disposed of at CCDD facilities in 2011. PC 62 at 22. IEPA presented additional figures to show that the same combined costs would be less than \$0.52 per cubic yard over the same ten-year period for approximately 99% of the CCDD disposed of at fill sites in 2011. *Id.*

IEPA examined the second perspective from which to consider costs, and that is the cost of not requiring groundwater monitoring, which it stated is difficult to quantify. PC 62 at 23. IEPA argued that among the factors to consider are the “costs avoided and resources preserved for current and future uses”. IEPA observed that once a small water system is contaminated, the corrective action may be to connect users to a treated community water supply (CWS). *Id.* at 24. These costs can be expensive. *Id.* at 25. IEPA reported that the cost to “merely run a service line from the water main to a typical house (based on 2002-2005 data) ranges from \$1,000 to \$1,500 per home, although this price range increases to \$4,000 to \$5,000 per home when other associated costs are included.” *Id.* at 25 and 26. Other examples were provided by IEPA,

including one from the City of McHenry that reported estimates for the homeowner's portion of the costs of connecting to a CWS as being \$8,600 to \$10,400 per home. *Id.* at 28.

IEPA stated that groundwater contamination sites "are some of the most expensive sites to remediate", and that it is "nearly impossible to totally clean up the groundwater once it is contaminated". PC 62 at 28. This leaves governments with few options, including treating the groundwater as it is withdrawn or connecting affected homeowners to a CWS; however, IEPA warned that "current knowledge of the threat of vapor intrusion, even providing CWS connections, may not be the final remedy".

### **Self-Implementation**

IEPA addressed the issue as to whether groundwater monitoring should be self-implementing. PC 62 at 29. IEPA argued that the Board has adopted rules in the past with similar self-reporting monitoring requirements, with no adverse impact to the environment. *Id.* One example is for certain types of existing facilities wholly or partially within groundwater setback zones or regulated recharge areas and landfills exempt from permits. *Id.* at 29 and 30. While the Board had expressed concern with the self-implementation of monitoring requirements, its response was to strengthen record-keeping and reporting requirements, both of which can be done in Part 1100.

IEPA acknowledged that many of its programs that require groundwater monitoring also require prior approval by IEPA of the groundwater monitoring system plans and IEPA oversight of construction activities. PC 62 at 30. IEPA admitted this would provide "greater certainty of compliance, but it also is resource intensive". IEPA noted that an important reason for self-implementation of monitoring requirements is due to IEPA's resource limitations. However, IEPA provided three reasons to support its view that the absence of IEPA's review and approval of monitoring plans and reports does not mean the self-implementing approach is "defective and cannot work". *Id.*

First, IEPA noted that while it does not agree that the required certification and screening procedures will be as effective as needed, it has acknowledged that these tools and MACS "are two of the barriers on which it is relying to provide protection from contaminated soil in a self-implementing program". PC 62 at 30. IEPA opined that threats to groundwater at fill operations are more likely to come from loads of soil rather than CCDD materials, which is why the latter has been designated as "clean". *Id.* at 31.

Second, IEPA indicated it will rely on licensed professional engineers to supervise the design and construction of the groundwater monitoring systems and preparation of related plans and reports. PC 62 at 31. Third, IEPA noted it will rely on field inspections to verify compliance with groundwater monitoring requirements, with IEPA estimating it will conduct no less than two inspections at each facility per year. *Id.*

### **Monitoring for Class I Groundwater Standards**

IEPA had recommended groundwater monitoring for all parameters where there are Class I groundwater standards. PC 62 at 33. IEPA argued that this is necessary because soil that is accepted at fill operations “could originate in voluminous amounts anywhere construction or demolition activities might take place”. Because of this, IEPA is “reluctant to reduce the parameters for monitoring” and considers the use of Part 620 parameters as a form of indicator contaminant monitoring. *Id.* IEPA did, however, exclude four radionuclides and eight explosives from the monitoring requirements, which would result in significant cost savings for the annual groundwater analysis requirement. *Id.* at 33 and 34. IEPA estimated the cost for the analysis of the Part 620 parameters to be approximately \$2,000 per sample, with one sample per monitoring well being required annually. *Id.* at 34.

IEPA addressed the recommendation posed by Mr. Hock that groundwater monitoring should not be required at CCDD facilities, or that if it was required, to base the monitoring on what is in the source material. PC 62 at 34. He suggested other parameters could be added if supported by the site’s historic records. *Id.* at 35. IEPA raised the question of how other site-specific parameters would be identified and incorporated into the site’s monitoring requirements in order to protect the public. IEPA argued that this approach “would require considerably more discussion and development”. Mr. Hock’s approach would, IEPA argued, rule out specific contaminants unless they are known to exist at the facility. *Id.* IEPA opined that ruling out entire categories of contaminants at fill operations would not be acceptable. *Id.* at 36.

IEPA also addressed Mr. Hock’s suggestion of monitoring only for contaminants based on site records and enforcement history. PC 62 at 36. IEPA argues that this approach is retrospective only, and that because the chances for soil contaminants exceeding the MACs will never be eliminated, groundwater monitoring must be both retrospective and prospective. This would allow for the detection of contaminants from materials already deposited in the fill operations and to anticipate those that might be deposited in the future. *Id.* Yet another problem with Mr. Hock’s recommendation is that some type of administrative mechanism would be needed for “periodic in-depth evaluations of facility records” to determine what monitoring parameters would be required. *Id.* at 37.

IEPA opined that its proposed Subpart G: Groundwater Monitoring provisions addresses all of these concerns. PC 62 at 37. IEPA argued that its proposal is substantially more comprehensive because its “Part 620 parameters include the major categories of contaminants such as metals and other inorganics, VOCs, SVOCs, [polynuclear aromatics] PNA, and pesticides. IEPA also noted that its proposed Part 620 parameters list is both retrospective and prospective in its reach. As a result, IEPA argued that its Part 620 Class I parameters should be adopted if groundwater monitoring requirements will be included. *Id.*

### **pH Levels**

IEPA addressed the issue of whether the rules should allow source owners/operators to amend soils with a low pH with limestone to increase soil pH as recommended by Mr. Huff and Dr. Roy. PC 62 at 38. IEPA noted that the Board agreed with this proposal, saying “there is nothing in the proposed rules that would prohibit an owner/operator to amend the soil with limestone to increase the soil pH prior to sending the soil to a fill site”. IEPA argued that this

practice is prohibited by subsection 1100.600(d)(2), which “prohibits this practice by excluding from Subpart F applicability “soil that has at any time been treated or diluted to reduce contaminant concentrations or mobility”. *Id.* IEPA further argued that this practice “can affect the legal requirements for managing the soil without actually reducing the concentrations in the soil”.

IEPA reported that the Board suggested the practice of adding limestone to reduce soil pH would only be allowed after the soil had been determined to meet the applicable MACs. *Id.* IEPA argued that it “does not accept this type of manipulation in the Board’s waste management and remediation programs”. *Id.* at 39. IEPA noted that requiring the MACs to be met before applying limestone to increase the soil pH would “probably be meaningless in the source-site owner/operator context where sampling and analysis are not required” because there would be no way to police this restriction. IEPA contended that “it is obligated to enforce Section 1100.600(d)(2) as written” and requested that the Board “revisit this issue and revise its opinion for consistency with Section 1100.600(d)(2) as written, or in the alternative, eliminate the conflict by creating a specific exception in this section for the practice of adding lime after confirmation of compliance. *Id.*

### **The Office of the Attorney General (PC 63)**

The People consistently advocated for the Board to adopt a comprehensive approach to protect the State’s groundwater that would include groundwater monitoring. PC 63 at 2. The People addressed: 1) the costs of groundwater monitoring, 2) the parameters to be monitored, 3) the design of groundwater monitoring systems, 4) self-implementation, and 5) evidence of contamination from a properly run facility. The Board summarizes the comments on each issue below.

#### **Costs of Groundwater Monitoring**

The People commented that a challenge in estimating the cost of groundwater monitoring is that each site is unique and several factors can impact the costs. PC 63 at 2. The factors that affect the cost of groundwater monitoring include the volume of the site to be filled, depth of groundwater, and the geology of the site. *Id.* At the filing of PC 63, cost information had been received from the IAAP (PC 34), Waste Management of Illinois, Inc. (Waste Management) (PC 33a), and IEPA (PC 39, 47). *Id.* at 3.

The People pointed out that the information from IAAP concerned a very large site, over 1,000 acres, known as Bluff City Materials (Bluff City). PC 63 at 3. The People took issue with the costs cited by IAAP because the “information is lacking supporting detail that would establish the basis for the significantly high estimates espoused by IAAP in its comments for both the initial installation costs and the annual sampling costs.” *Id.* Waste Management offered that the costs per ton would be “insignificant”, while IEPA estimated the costs for installation of groundwater monitoring at 99% of sites would be less than \$0.50 per cubic yard. *Id.* at 4. The People concurred with IEPA’s analysis. *Id.*

Given the proximity of both public and private water wells to CCDD sites, the People argued that the costs are not “exorbitant” and the cost should not preclude groundwater monitoring. PC 63 at 4. The People noted that the General Assembly made findings that groundwater should be protected in Section 11 of the Act (415 ILCS 5/11 (2014)), Section 2 of the Groundwater Protection Act (415 ILCS 55/2 (2014)) and the prohibitions in Sections 12 and 22.51(f)(1) of the Act (415 ILCS 5/12, 1251(f)(1) (2014)). *Id.* Section 2(b) of the Groundwater Protection Act states that “it is the policy of the State of Illinois to restore, protect, and enhance the groundwaters of the State, as a natural and public resource” (415 ILCS 55/2(b) (2014)). The People argued that given that public and private drinking wells are located near CCDD sites, the policy of the State is significant. *Id.*

The People argued that the dewatering of CCDD facilities will also offset the cost of groundwater monitoring. PC 63 at 5. Dewatering of the fill area is accomplished through the issuance of an NPDES permit, and the IEPA’s proposal would allow sites that have an NPDES permit for dewatering to delay installation of groundwater monitoring. *Id.* at 5-6. The People opined that as a result CCDD and uncontaminated soil fill sites that “could demonstrate that a cone of depression was being maintained at their sites would not have to incur the costs associated with groundwater monitoring well design and groundwater monitoring for potentially several years.” *Id.* at 6. The People pointed out that Waste Management opined that a company could continue to dewater for years as long as the site did not go through closure. *Id.*

### **Parameters to be Monitored**

The People urged the Board to follow IEPA’s recommendation and require monitoring for all Class I groundwater standards. PC 63 at 6.

### **Design of Groundwater Monitoring System**

The People concurred with IEPA’s recommendation to require that a professional engineer supervise and design the groundwater monitoring system. PC 63 at 6-7.

### **Self-Implementation**

The People opposed self-implementation of groundwater monitoring and argued that CCDD and uncontaminated soil fill operations should be required to file monitoring plans and results with IEPA. PC 63 at 7. The People opined that reporting to IEPA would allow IEPA to ensure that contamination has not occurred and would allow public access to the information. *Id.* The People requested the Board to include a requirement that groundwater monitoring plans and reports be submitted to IEPA. *Id.* at 6.

### **Evidence of Contamination from Properly Run Facilities**

The People maintained that the record contains evidence that CCDD fill operations pose a threat to groundwater as well as actual contamination of groundwater. PC 63 at 8. The People pointed to testimony by IEPA regarding a “poorly run CCDD facility” that showed levels of contamination. PC 63 at 9. The People argued that based on this testimony “prudence dictates

the inclusion of groundwater monitoring at CCDD facilities to protect groundwater, as required by Section 22.51(f)(1) of the Act. 415 ILCS 5/22.51(f)(1) [2014.]” *Id.*

The People maintained that the lack of monitoring means that data collection regarding impacts to groundwater has not occurred. PC 63 at 9. The People opined that while the Board noted the lack of evidence regarding contamination, “the evidence that these facilities have not impacted the groundwater was even scarcer”. *Id.* (emphasis in original). The People argued that:

The Board’s premise based on the purported lack of data does not support its conclusion that there are no groundwater impacts from CCDD. Essentially, the Board has indicated that the record is incomplete, therefore no groundwater monitoring should be required, especially because the “discarded” CCDD is not “waste” and there are adequate soil screening procedures in place. However, clean construction or demolition debris is not actually “clean,” as CCDD by its very definition may lawfully contain cancer causing chemicals in the form of PNAs (*i.e.* reclaimed or other asphalt) without reference to any regulatory levels. *See* 415 ILCS 5/3.160(b) (2014). Therefore, the specter of groundwater contamination will always exist at CCDD facilities, particularly because there is no requirement in the Part 1100 Regulations to employ any protective liners at these facilities. *Id.* at 10.

The People also took issue with the Board’s “assumption” that facilities are and will be “properly run”. PC 63 at 10. The People claimed that this assumption is incorrect as demonstrated by the People’s testimony (Exh. 35). *Id.* The People noted that since the regulations were originally adopted, the People have brought enforcement actions for violations at CCDD facilities that “clearly call into question the ability to determine the nature of materials accepted by these facilities.” *Id.* at 11. Since the amendments to Part 1100 adopted by the Board on August 12, 2012 in R12-9, the People filed two additional actions alleging violations of the Act and CCDD regulations. *Id.* Because of these actions, the People lack confidence that soil certifications and load checking procedures are adequate to protect groundwater. *Id.*

The People noted that in 1997 the General Assembly adopted a new definition for CCDD, “which essentially provided that to the extent provided by federal law, CCDD could be disposed of at a CCDD fill site, without the need for any soil certification, load checking and/or screening.” PC 63 at 12. From 1997 to 2005 there were no regulations in place and no requirement for IEPA permitting. *Id.* The People noted that in 2005, the General Assembly enacted Section 22.51 of the Act (415 ILCS 5/22.51 (2014)) that included a requirement that loads be checked with a photo ionization detector or equivalent device. *Id.* The People asked:

In sum, the lack of effective procedures to identify contaminated soil from 1997 to 2010 at “properly run” facilities, let alone the improperly run facilities, begs the question how the Board’s newly promulgated soil certifications can ensure that there will be no groundwater contamination at any CCDD facility in the State, where dumping occurred before 2010 and continues today? *Id.* at 13.

The People also expressed concern that the responsibility for demonstrating that soil is uncontaminated is left to soil generators. PC 63 at 13. The People argued that unless the soil certification procedures are 100% effective, regulators cannot be sure groundwater is protected. *Id.* at 14. Because of this, the People opined that the regulations are under-inclusive as there is no mechanism to determine impacts to groundwater or procedures for corrective action. *Id.* The People agreed with IEPA that groundwater monitoring is the most reliable protection for groundwater and requested the Board to include groundwater monitoring in the rules. *Id.* at 14-15.

**Dorothy Hynous (PC 65)**

On May 20, 2013, Dorothy Hynous filed a comment with the Board in response to an editorial in the *Chicago Tribune* that supported groundwater monitoring requirements at “dump sites”. PC 65 at 1. Ms. Hynous agreed with the Tribune and argued that the “standards should be raised to protect Will County residents who live near quarries and rely on public water. She argued that the Board “should make a decision that protects the residents of Illinois”. *Id.*

**Mark J. Krumenacher, PG, of GZA GeoEnvironmental, Inc. (PC 66)**

Mr. Krumenacher asked that the Board accept his previous testimony (Exh. 11) for consideration in this subdocket. PC 66. He also indicated support for the testimony of Martin Hamper (Exh. 56). Mr. Krumenacher’s previous testimony sought inclusion of licensed professional geologists in Sections 1100.205, 1100.212, 1100.412, 1100.525, 1100.530 and 1100.710. Exh. 11 at 3.<sup>3</sup>

**SUMMARY OF TESTIMONY**

As discussed above, after reviewing the public comments, the Board determined that an additional hearing was necessary. The following summarizes the testimony heard by the Board at the May 20, 2013 hearing.

**Representative Lawrence M. Walsh Jr.**

Representative Walsh was asked to testify on behalf of his constituents to reaffirm the District’s stance on the importance of groundwater monitoring for CCDD sites in the Joliet area. Tr. at 9. Specifically, he stated that Will County has nine active permitted CCDD facilities within the county, which are all located adjacent to the principal waterway systems of northwestern Will County including the DuPage River and the Des Plaines River. Tr. at 9. Further, Representative Walsh stated that 71% of Will County’s residents rely on groundwater for their drinking water. Tr. at 9. He reiterated that for a small cost of \$0.06 to \$0.16 “per cubic foot”, the groundwater can be monitored. Tr. at 10. Representative Walsh concluded by stating

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<sup>3</sup> The Board included licensed professional geologists in Sections 1100.205, 1100.212, 1100.412, 1100.525, and 1100.530. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9 (Aug. 23, 2012).

that his constituents are concerned about the safety of Will County's groundwater, especially within the Joliet area, and asked the Board to consider amending the rules to require groundwater monitoring at CCDD sites. Tr. at 10.

**Senator Pat McGuire**

Senator Pat McGuire testified on behalf of the constituents of the 43rd District and expressed his strong support for the implementation of groundwater monitoring at CCDD sites. Tr. at 11. He stated that "the 43rd District is the populous of west central Will County" and includes the townships of Jackson, Channahon, Joliet, Lockport and DuPage. Tr. at 11. He stated that there are nine permitted CCDD facilities within the District and four of them are directly beside the Des Plaines River. Tr. at 11-12. Senator McGuire noted that 71% of Will County residents rely on a shallow aquifer system for their potable water supply, and contaminants near or below the ground surface can rapidly infiltrate into this aquifer and move through the aquifer and towards waterways or areas of groundwater withdrawal. Tr. at 12. To protect the community from contamination, Senator McGuire urged the Board to implement three things. First, he requested groundwater monitoring at all CCDD facilities. Second, he asked that the reporting of non-compliant CCDD facilities be in line with conditions established for solid waste landfills. And finally, he requested that collective action in cases of non-compliance with groundwater quality standards also be in line with conditions established for solid waste landfills. Tr. at 13. Senator McGuire concluded by stating that groundwater monitoring systems at CCDD sites are absolutely essential because they would ensure that community water supplies are protected and safe from contamination. Tr. at 12.

**Will County Executive Larry Walsh, Sr.**

Will County Executive and former State Senator of the 43rd District, Larry Walsh, Sr., urged the Board to require groundwater monitoring at CCDD and uncontaminated soil fill operations. Tr. at 15. To support his argument, Mr. Walsh presented several reasons why such monitoring would be important. He stated that Will County is the fourth largest county in the State of Illinois. Tr. at 14. The majority of Will County's residents and businesses rely on groundwater and not Lake Michigan water, as their primary drinking and domestic water source. Tr. at 15. Many of the CCDD and uncontaminated soil fill operations are located near Will County's residential and businesses and have their debris within close proximity to the water source that they will consume or use. Tr. at 15-16. Mr. Walsh further stated that until recently, CCDD and uncontaminated soil operations were not required to thoroughly screen or verify the loads that they were receiving. Tr. at 16. The screening methods were done with just visual check or using a device that would only detect a portion of the load received. Tr. at 16. Mr. Walsh contended that such lax screening methods made it possible that contaminated material has been accepted at the facilities for many years. Tr. at 16. He argued that groundwater monitoring is crucial for this reason. Tr. at 16.

Additionally, Mr. Walsh argued that the protection of groundwater should not be based on cost, since drinking water is vital to human lives. Tr. at 16. He reiterated the determination made by Will County experts, as well as the IEPA and others, that the cost to perform groundwater monitoring is \$0.06 to \$0.16 per cubic yard. Tr. at 17. He concluded his testimony

by expressing how passionate and sincere the 700,000 residents of Will County are about this issue and stated that the county is projected to become the second most populated county in the State of Illinois reaching a peak of 1.2 million residents in the next 25-30 years. Tr. at 17. He reminded the Board that the vast majority of those 1.2 million residents will expect their groundwater to be safe and secure. Tr. at 17.

### **County of Will, Represented by Stuart J. Cravens**

Mr. Cravens submitted testimony on behalf of Will County, first offering a general statement and then responding to the Board's questions.

### **Groundwater Resources in Will County**

Mr. Cravens testified that Will County "strongly supports" groundwater monitoring for CCDD facilities based on years of experience with these facilities. Exh. 55 at 1. Mr. Cravens expressed concern that there is not enough testing or oversight by IEPA. *Id.* Will County has nine of 10 permitted sites in Illinois and those facilities are "at or near" the DuPage River and the Des Plaines River. *Id.* Also 71% of Will County residents rely on groundwater as their potable water supply. Will County retained Mr. Cravens who is a licensed professional geologist and has been involved in groundwater investigations and hydrogeological studies for over 30 years. *Id.* at 1-2.

Will County's shallow aquifer system exists within both the glacial sand and gravel deposits and the Silurian Dolomite bedrock and serves as vital resource in the community. Exh. 55 at 2. Communities throughout Will County rely on groundwater from that bedrock for drinking water and general household use water. *Id.* Even those Will County residents who are not on a community water supply, however, get most of their drinking water from groundwater pumped from either sand and gravel deposits or the Silurian Dolomite Aquifer. *Id.*

The top 100-150 feet of Silurian Dolomite Aquifer contain the most frequent and large water-bearing openings. Exh. 55 at 2. The aquifer is an excellence source of drinking water, in part, because its structure allows groundwater to flow large distances over a short period of time. *Id.* However, the aquifer's unique structure makes it susceptible to contamination from surface and near surface sources. *Id.* When a contaminant enters the aquifer it can move tens of feet per day through the aquifer towards waterways or areas of groundwater withdrawal. Mr. Cravens conceded that he is unaware of groundwater contamination resulting from a CCDD or uncontaminated soil fill operation. Tr. at 36-37

### **Costs of Groundwater Monitoring**

In its comment (PC 55), Will County submitted cost estimates for development and installation of groundwater monitoring programs at four of Will County's existing CCDD and uncontaminated soil fill facilities. Mr. Cravens indicated that Will County estimated that it would cost \$156,300 to implement a groundwater monitoring program consisting of five monitoring wells under the supervision of a hydrogeologist. Exh. 55 at 3. In addition, Will County estimated that the annual costs to sample, analyze, and produce a report for the modified

groundwater quality parameters in Part 620 would be \$18,700. *Id.* Will County also concluded that the costs to implement and maintain groundwater monitoring and reporting programs at four CCDD facilities in Will County were between \$0.06 to \$0.16 per cubic yard. *Id.* Furthermore, IEPA's estimates for implementing groundwater monitoring programs "are generally in line with" Will County's calculations. Mr. Cravens stated that "the discussion of costs to implement groundwater monitoring at CCDD and uncontaminated soil fill facilities is somewhat facile" because they would only amount to a fraction of the costs potentially incurred by an owner whose facility's groundwater source is contaminated. *Id.*

### **Parameters to be Monitored**

Aside from the parameters contained in Section 1100, Appendix A, Mr. Cravens stated that Will County objected to any limitation on the monitoring parameters for which there is a Class I groundwater quality standard as listed in 35 Ill. Adm. Code 620.410. Exh. 55 at 3. Mr. Cravens listed four considerations. First, Mr. Cravens stated that "VOCs are not a reliable indicator of the presence of PAHs or other semi-volatile organic contaminants, such as those present in asphalt, roofing materials, and some other building materials." *Id.* Second, Mr. Cravens stated that "RCRA metals are not an indicator parameter for other inorganic constituents that may be associated with CCDD [and uncontaminated soil fill]." *Id.* Third, Mr. Cravens testified that "other inorganic constituents that are not RCRA metals may be present in groundwater at elevated concentrations at CCDD sites." *Id.* Finally, Mr. Cravens testified that "the selection of parameters for groundwater monitoring should in no way be based on the cost of monitoring as it has been shown by the IEPA, [Waste Management of Illinois], and Will County's own cost estimates that the costs of groundwater monitoring will not be economically burdensome to CCDD [and uncontaminated soil fill] owners/operators." *Id.* Mr. Cravens included the analyses of two IEPA-certified laboratories for the modified Part 620 list versus VOCs and RCRA metals. The analysis for the modified 620 list yielded an estimated cost of \$750 to \$1,300 per sample. *Id.* To analyze for VOCs and RCRA metals, the laboratory cost is \$136 to \$161 per sample. *Id.* Mr. Cravens noted that despite the disparity between the price per sample, "the overall costs savings when incorporated into the cost per ton for disposal of material is minimal." *Id.* Mr. Cravens added that comparing dissolved metal concentrations to the applicable groundwater standards is acceptable. *Id.*

### **Changes to Proposal if Groundwater Monitoring is Added**

Mr. Cravens recommended three changes that should be made in consideration of adding groundwater monitoring. Exh. 55 at 4. Mr. Cravens first suggested that a definition be included for "background groundwater monitoring frequency to establish a baseline groundwater quality for statistical analysis." *Id.* According to Mr. Cravens, the change would benefit CCDD and uncontaminated soil fill owners and operators "because it would establish the variability in background groundwater quality over the course of a year, potentially allowing for a higher upper concentration limit for some parameters." *Id.* Second, Mr. Cravens requested that a more specific definition be provided for "statistical analysis procedures acceptable for comparing upgradient (background) to downgradient (compliance well) groundwater quality." *Id.* Finally, Mr. Cravens recommended initial groundwater sampling be required quarterly or semi-annually, rather than just annually. *Id.* More specifically, Mr. Cravens recommended quarterly or semi-

annual analyses of a smaller subset of Part 620 parameters and an annual analysis of the full set of 620 parameters (excluding Part 1100, Appendix A parameters). *Id.* Any increased costs as result of more frequent testing “will be partially off-set by fewer parameters analyzed.” *Id.* Mr. Cravens emphasized that most importantly, “the increased frequency will allow for detection monitoring that takes into account seasonal changes in groundwater flow directions, groundwater gradients, groundwater chemistry, and other factors.” *Id.*

### **Front-end Screening**

Mr. Cravens responded that the front-end screening requirements, which are designed to insure contaminated materials are not disposed of at CCDD and uncontaminated soil fill facilities, have only recently been required. Exh. 55 at 4. According to Mr. Cravens, if there are no front-end screening requirements, then the only way to know if contaminated materials have entered a CCDD facility is by conducting groundwater monitoring. If groundwater monitoring was the sole mechanism for determining if contaminants entered the facility, “there might be a lag time of months to years before impacts are detected and identified within the groundwater unit.” *Id.*

### **Self Implementing**

Mr. Cravens stated that “a self-reporting system for groundwater monitoring will weaken the intent of the proposed new groundwater regulations to provide notification of releases to the environment.” Exh. 55 at 4. Mr. Cravens further stated that a self-implementing system would “create an immediate lack of trust by the public towards both the process and the CCDD [uncontaminated soil fill] site owners/operators.” *Id.*

### **Evidence of Groundwater Impacts at Properly Run Facilities**

Mr. Cravens contended that the lack of reliable data “does not constitute proof that impacts to groundwater are not occurring or will not occur in the future.” Exh. 55 at 5. In fact, Mr. Cravens maintains that there is a potential threat to groundwater from contaminants associated with CCDD [uncontaminated soil fill] associated from the materials themselves, “even those screened and accepted within permit requirements.” *Id.*

Mr. Cravens further asserted that evidence provided for the Lyons CCDD site and one site in Kane County was atypical and does not warrant receiving consideration in the decision-making process for implementation of groundwater monitoring at CCDD and uncontaminated soil fill facilities. Exh. 55 at 5. Mr. Cravens explained that the Lyons and Kane County sites “are only two sites and the monitoring was not done under a permitted system with IEPA scrutiny.” *Id.*

### **Remediation Objectives**

For those cases where baseline groundwater monitoring data from existing CCDD and uncontaminated soil fill facilities show exceedances of groundwater quality standards from past practices related to disposal of CCDD and uncontaminated soil fill, Will County’s position is that

“those facilities must either achieve compliance via the Corrective Action Program detailed in Section 1100.755 of the proposed regulations in order to continue operating or discontinue operations.” Exh. 55 at 5 (emphasis in original). Mr. Cravens also explained its approval of a regime that allows, in cases of noncompliance with groundwater quality standards, application for a Groundwater Management Zone (GMZ). *Id.* As a result, a remedial alternative through an IEPA-approved Corrective Action Program would be implemented to help ensure compliance. Mr. Cravens further proposed that if compliance cannot be demonstrated, then the permit for the continued operation of the facility would be revoked. *Id.*

### **Applicable Groundwater Quality Standards**

It is Will County’s position that “Class I (potable resources) groundwater quality standards are appropriate for all hydrogeologic units at a CCDD [and uncontaminated soil fill] facility unless a demonstration can be made to IEPA that the groundwater within any individual hydrogeologic unit potentially impacted by the facility can meet the definition of Class II (general resource) groundwater.” Exh. 55 at 5.

### **Location Restriction**

Mr. Cravens testified that Will County shares the position of INPC that the Class III (Special Resource) groundwater contribution areas to dedicated Nature Preserves should be protected from potential groundwater impacts from CCDD and uncontaminated soil fill facilities. Exh. 55 at 6. In addition, Mr. Cravens supports the requirement of a minimum setback distance of CCDD and uncontaminated soil fill facilities from dedicated Nature Preserves. *Id.*

### **Martin J. Hamper, PG**

On behalf of the Illinois-Indiana Section of the American Institute of Professional Geologists (AIPG), Mr. Hamper provided pre-filed testimony to support the inclusion of Illinois Professional Geologists as a designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed 35 Ill. Adm. Code Section 1100.710. Exh. 56 at 1. Mr. Hamper’s testimony explains that the licensure process already in place in Illinois assures that Professional Geologists are qualified to be on the list of “delegated professionals” in Section 1100.710. *Id.*

According to Mr. Hamper the Professional Geologist Licensing Act [225 ILCS 745] expressly states that “the planning, review, and supervision of data gathering activities and interpretation of data on regional or site specific geological characteristics affecting groundwater are examples of the practice of professional geology in Illinois.”

Mr. Hamper’s second reason for the revision is that the educational curriculum required for entry into the profession as Professional Geologists warrants their inclusion as another designated professional that may prepare or supervise the activities described in Section 1100.710. Exh. 56 at 2.

Mr. Hamper points out that the National Association of State Boards of Geology (ASBOG) examination readies Professional Geologists “to prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.” Exh. 56 at 4. Also included in the ASBOG examination is a list of topics in which the examinees must demonstrate their proficiency. *Id.*

Mr. Hamper also points out that the General Assembly has already recognized that Illinois Professional Geologists “have the education, training, experience and licensure to conduct and certify soil and groundwater investigations.” Exh. 56 at 4, referring to 415 ILCS 5/58.6 and 58.7(f) (2014). Additionally, the Act provides that Professional Geologists may certify and submit plans and investigation reports under the Leaking Underground Storage Tank (LUST) program. *Id.* at 5.

### **Land Reclamation & Recycling Association**

Brian Lansu of LRRRA prefiled testimony (Exh. 57) responding to the Board’s questions (Exh. 52). In addition, at hearing Gregory Wilcox testified on behalf of LRRRA.

### **Costs for Monitoring**

Responding to the Board’s request that the groundwater monitoring costs in the record for Bluff City be broken down for cost comparison purposes (Question 1, Exh. 52), Mr. Lansu provided information regarding the costs associated with developing groundwater modeling to determine groundwater flow and the rate of flow into the Bluff spring. Exh. 57 at 1. Mr. Lansu explained that the modeling was developed to protect the Bluff City spring and prevent degradation as a result of nearby mining, industrial park development, and CCDD site filling. *Id.* Eight permanent monitoring wells were installed from 20 to 80 feet deep at a cost of \$106,985; in total, the out-of-pocket costs of developing the groundwater model was \$364,547. *Id.* Mr. Wilcox clarified that the costs provided were over 10 years old. Tr. at 62-63. He also explained that in doing groundwater monitoring, it is not a two-dimensional system, but a three-dimensional system because modeling of groundwater flow is necessary. Tr. at 63. So costs for monitoring are not just the costs of drilling wells, but also include costs for defining groundwater flow. *Id.*

### **Water Quality at Reliable Lyons**

In response to the Board’s question regarding data provided by Mr. Lansu in comment (PC 58) (Question 8, Exh. 52), Mr. Lansu provided additional water quality data concerning the Reliable Lyons site. Exh. 57 at 1. Reliable Lyons accepts more than 700,000 cubic yards of fill annually from primarily urban and industrial construction projects. *Id.* Mr. Wilcox explained that Reliable Lyons is one of the largest CCDD facilities and takes soil from the Chicagoland area primarily. Tr. at 64. Since 2006, Reliable Lyons has accepted roughly 6,000,000 cubic yards of CCDD and continuously maintains a groundwater elevation of 372.0 USGS, which is currently 150 to 250 feet below the CCDD fill in the quarry. Exh. 57 at 1. Mr. Wilcox testified that Reliable Lyons is designed with an inward gradient so the water in the facility is often diluted with groundwater. Tr. at 64. Reliable Lyons has pumped a total of 74.9 million gallons

in the six months preceding May 13, 2013. Exh. 57 at 1-2. Of the 74.9 million gallons, 32 million gallons resulted from precipitation while the remaining 42.9 million gallons came from surrounding groundwater flowing into the site. *Id.* at 2.

LRRA estimated that 43% of the water pumped by Reliable Lyons has been in direct contact with the CCDD material at the facility. Exh. 57 at 2. Reliable Lyons has sampled the pumped water discharged from the dewatering well for SVOCs and RCRA metals and “has found only one detect (Barium at 0.052 mg/L per attached Lab report).” *Id.* Mr. Lansu further states that “[a]ssuming a dilution ratio of 2.34 to 1 from groundwater and that groundwater contains no Barium; the water flowing thru the CCDD has a concentration of Barium roughly equal to 0.12 mg/L.” *Id.*

### **James E. Huff**

James E. Huff provided testimony responding to a number of the Board’s pre-filed questions, on the proposed groundwater regulations proposed by IEPA, on the pH values for uncontaminated soil, and on MACs in the regulations. The Board summarizes this testimony below.

### **Response to Board Questions**

**Comment on the Prevalence of Parameters in CCDD and Uncontaminated Soil.** Mr. Huff previously indicated that monitoring costs could be minimized by limiting “the groundwater monitoring to volatile organic compounds (VOCs) and dissolved RCRA metals,” rather than testing for the entire list of parameters in the Board’s groundwater quality rules at Part 620 (35 Ill. Adm. Code 620). PC 59 at 3. In response to his comment, the Board asked several questions of the participants including a question regarding the prevalence of parameters other than VOCs and RCRA metals. Exh. 52 at 3(a). Mr. Huff directed the Board’s attention to *The Illinois Integrated Water Quality Report and Section 303(d) List-2012, Volume II: Groundwater*, which focused on VOCs, chlorides, nitrates, and herbicides. Exh. 58 at 1-2. According to Mr. Huff, the report supports his conclusion that no other contaminants could be present in CCDD or uncontaminated soil. *Id.* at 2. Mr. Huff emphasized the importance of remembering “that uncontaminated soil going to a CCDD or uncontaminated soil fill is an urban issue, and not an agricultural area issue.” *Id.* The excess soil from roadway construction activities is the primary source of uncontaminated soils, and gasoline stations, dry cleaners, and similar types of commercial industries are located along roadways. *Id.* Mr. Huff also stated that “metals to a large degree will be held in the soil due to the cationic exchange capacity of soils.” *Id.*

**Costs for a VOC and Dissolved Metal Analysis Versus Running All Part 620 Parameters.** Mr. Huff testified that the price for a VOC analysis of a groundwater sample is about \$180 per sample. Exh. 58 at 2. Since the list of parameters in Part 620 includes a number of metals that are not common to industrial or commercial facilities, the cost per sample would be about \$306. *Id.* However, if only the eight RCRA metals were tested, the price per sample would be \$126. SVOCs are included on the list of parameters in Part 620 and analysis would

cost about \$300 per sample. Finally, “to run the complete 620 List, excluding the contaminants exempted, the cost per sample would be on the order \$2,303 per sample.” *Id.* at 3.

**Part 620 Metals Standards Based on Dissolved Concentrations.** Mr. Huff stated that it is unclear whether the groundwater quality metals standards are based on dissolved concentrations. Exh. 58 at 3. Often, monitoring wells in Illinois are screened in unconsolidated units rich in silts and/or clays, and Mr. Huff stated that “developing the well sufficiently to achieve a 1 Turbidity Unit level cannot be achieved.” *Id.* In fact, when screening for total metals, “the results simply reflect what is in the groundwater plus what is in particulate state.” *Id.*

**Front-End Screening.** Mr. Huff does not recommend implementing the front-end screening requirements contained in the Part 1100 adopted on August 21, 2012. Exh. 58 at 3-4. Mr. Huff explained that, as he previously testified, there are false positives with the photo ionization detector (PID) meter that have caused loads to be rejected at the receiving facility. *Id.* at 3. He further explained that the receiving facilities have each adopted their own protocol and “it would seem that each facility should be allowed to determine what PID response should trigger rejection, as they are clearly accepting additional responsibility with monitoring wells.” *Id.* at 4. Mr. Huff added that if IEPA is uncomfortable with this suggestion, they should direct their attention to his previous recommendation of “a value of 5 ppm which would eliminate most of the false positives.” *Id.*

**Inclusion of Remediation Options at CCDD and Fill Sites.** Mr. Huff expressed concern that if the proposed monitoring rules are adopted, “either very little soil would meet the definition of uncontaminated soil or that the CCDD and uncontaminated soil fill sites would vacate this market.” Exh. 58 at 4.

**Pre-existing conditions at CCDD Facilities.** Mr. Huff noted that for many years the industry was not heavily regulated and to require monitoring at existing facilities would pick up not only new impacts but existing impacts. Exh. 58 at 4. Developing a baseline would “grandfather” the pre-existing contamination. Mr. Huff explained that the original discussion concerning pre-existing conditions assumed any discovered groundwater impacts “would be found through additional monitoring as being statistically significant.” *Id.*

**Please Provide a Range Of Remediation Cost.** Mr. Huff provided a USEPA report on pump and treat costs at Superfund sites as a comparison to what would be required at these CCDD Facilities under the proposed rules. The estimated median capital cost of installation is \$2.9 million. Exh. 58 at 5.

**Identify the Specific Provisions of IEPA’s Proposed Rules That Reference the Non-Degradation Requirement.** Mr. Huff directed the Board’s attention to Mr. Richard Cobb’s testimony in Proposed Amendments to Groundwater Quality Standards, 35 Ill. Adm. Code 620, R08-18, which described the antidegradation concept. Exh. 58 at 5. Mr. Huff noted that this concept was included in IEPA’s proposed CCDD regulations. *Id.* IEPA’s proposed CCDD regulations made one concession in Section 1100.720 by allowing operators to achieve Class I groundwater standards on the subject property in lieu of being held to a non-degradation

standard. In addition, “if corrective actions are needed beyond the fill operation property boundaries, subsection 1100.720(d) requires compliance with Part 620, and as Mr. Nightingale noted, includes the non-degradation provisions.” *Id.*

### **Comments on Proposed Rule Language**

Mr. Huff provided specific testimony on IEPA’s proposed groundwater monitoring rules. That testimony is summarized below.

**Section 1100.725(b) Groundwater Monitoring System.** In noting the difficulty of satisfying the vertical component of Section 1100.725(a)(2), Mr. Huff testified, “[w]ithout an extensive hydrogeological study, the vertical component will be unknown.” Exh. 58 at 6. Mr. Huff’s comments continued with an explanation of how such a study can be conducted. According to Mr. Huff, these studies “will require a minimum of two wells screened at different elevations at each location...and this should be factored into the costs.” Finally, he warned that “the wells installed may not be indicative of impacts from the CCDD facilities.” *Id.*

**Section 1100.725(b) Groundwater Monitoring System.** Mr. Huff next provided testimony on the language in Section 1100.725(b), which does not require screening wells into separate groundwater monitoring systems if the sampling will “enable detection and measurement of constituents that have entered the groundwater from each unit.” Exh. 58 at 6, quoting proposed Section 1100.725(b). Mr. Huff stated that the rule language makes “unclear how one can accomplish this requirement without the separate screening of wells at different elevations,” and requested that IEPA “provide some guidance in the record on this point.” *Id.*

**Section 1100.735 Monitoring Parameters.** Mr. Huff testified that the list of monitoring parameters “is excessive and will result in unnecessary testing and follow-up work.” Exh. 58 at 6. Specifically with monitoring for total versus dissolved metals, Mr. Huff testified that specifying dissolved metals will result in elimination of a significant number of false positives due to sediment. *Id.* Regarding Iron and Manganese, Mr. Huff stated that the presence of iron and manganese results from “the oxidation/changing conditions within the aquifer” rather than the soil content. *Id.* He added, “major problems will result if these compounds remain on the list” and recommended that they be added to Section 1100 Appendix A’s list of exemptions. *Id.* at 6-7. *Id.*

Mr. Huff testified that the metals he discussed above are encountered in few industries and that “[i]t seems unreasonable to impose the economic burden of routinely testing every monitoring well at each quarry for these metals that are rarely encountered.” Exh. 58 at 7. He recommended that these metals be added to Section 1100 Appendix A’s list of exemptions. *Id.*

Continuing with his testimony on specific parameters, Mr. Huff noted that with chloride, sulfate, and total dissolved solids, these parameters are list as Secondary Drinking Water Standards due to taste issues, not health issues, and recommended adding all three to the Section 1100 Appendix A list of exemptions. Exh. 58 at 7. Mr. Huff explained that fluoride, nitrate, and perchlorate, should be added to Section 1100 Appendix A’s list of exemptions. *Id.* And finally for organic chemical constituents, Mr. Huff stated that it makes “no technical or economic sense” to require testing of all organic constituents without consideration of their mobility. *Id.* He

added that “IEPA will likely be concerned that one or more of these parameters recommended could be present at these CCDD and uncontaminated soil fill sites” but “nothing...would preclude IEPA from collecting its own samples and testing for these parameters as they deem this to be an appropriate expenditure of the State’s financial resources.” *Id.*

### **Maximum pH for Uncontaminated Soil**

Mr. Huff testified that the Board imposed “unexpectedly to all participants” a maximum pH of 9.0 for uncontaminated soil fill, and that created a number of problems. Exh. 58 at 8. Mr. Huff explained that the aggregate limestone beneath roadways and buildings can have a pH as high as 12.45 and loads have been rejected for exceeding the 9.0 pH level. *Id.* As many quarries are limestone quarries where pH values of higher than 9.0 exist, the limit set by the Board “does not make sense”. *Id.* Mr. Huff recommended that the pH limit be raised to 12.5. *Id.*

### **Codify MACs in Regulations**

Mr. Huff testified that the MAC values being set by IEPA, with no input from outside IEPA are not reasonable. Exh. 58 at 9-10. Mr. Huff asked that the current docket be extended to vet MACs and place the MACs in the regulations. *Id.* at 10.

### **The Office of the Attorney General**

The People presented prefiled testimony by Stephen Sylvester (Exh. 59) in response to the Board’s pre-filed questions (Exh. 52) regarding groundwater monitoring. Mr. Sylvester stated that the People have been involved in this rulemaking since the rule was being considered by IEPA and have advocated for groundwater monitoring throughout the R12-9 proceeding. Tr. at 82.

### **Changes to Proposal if Groundwater Monitoring is Added**

Mr. Sylvester compared CCDD to inert waste and explained that the primary distinction between inert waste and CCDD is that CCDD contains asphalt, thereby warranting classification as a “chemical waste” rather than an “inert waste.” Exh. 59 at 2. Specifically, inert waste includes “only non-biodegradable and non-putrescible solid wastes; including but not limited to, bricks, masonry, and concrete. 35 Ill. Adm. Code 810.103.” Exh. 59 at 1-2. CCDD, on the other hand, “means uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, reclaimed or other asphalt pavement, or soil generated from construction or demolition activities. 415 ILCS 5/3.160 (2014).” *Id.*

Mr. Sylvester noted that proposed Section 1100.740 provides, as a minimum, for annual groundwater testing whereas the Board’s inert waste regulations require semi-annual testing. Because inert waste is potentially more benign than chemical waste, Mr. Sylvester recommended that groundwater monitoring be conducted quarterly, rather than annually. Exh. 59 at 2.

Mr. Sylvester recommended that the Board consider narrower timeframes to address any instances of non-compliance with the Class I Groundwater Standards. Exh. 59 at 2. In addition,

Mr. Sylvester suggested that proposed Section 1100.745(c), as currently drafted, assumes that an owner/operator's corrective action program will be acceptable. *Id.* Therefore, Mr. Sylvester suggested that corrective action programs "should be subject to review and approval by the [IEPA] and that any deficiencies identified by the [IEPA] should be addressed within 30 days." *Id.* at 3.

Mr. Sylvester also recommended that Section 1100.750 be deleted from Subpart G and suggested that "if an owner/operator wants to make an alternate non-compliance response, it should do so in accordance with the time frames required in Section 1100.745." Exh. 59 at 3.

### **Front-end Screening**

Mr. Sylvester recommended that the front-end screening requirements be retained, even if groundwater monitoring is required. Exh. 59 at 3. Mr. Sylvester explained soil certification and load checking for CCDD disposal facilities alone does not sufficiently ensure that CCDD and uncontaminated soil fill sites will not impact State groundwater. *Id.* Mr. Sylvester advocated for a "dual approach" to regulation of CCDD and uncontaminated soil fill sites consisting of both groundwater monitoring and front-end screening to ensure that groundwater is protected. *Id.* Mr. Sylvester opined that this approach is particularly necessary for those who rely on groundwater for drinking water. *Id.*

Mr. Sylvester argued that the Board should adopt a comprehensive approach in protecting the State's groundwater that includes groundwater monitoring at CCDD facilities. Exh. 59 at 4. Mr. Sylvester is concerned that without groundwater monitoring, contamination will only be discovered once it has impacted individuals relying on groundwater for drinking water. *Id.* "Such a scenario is at odds with the General Assembly's requirement that the Board promulgate standard and procedures necessary to protect groundwater. *See* 415 ILCS 5/22.51(f)(1); *see also* ILCS Const. Art. 11, § 2 (Each person has a right to a healthful environment)." *Id.*

### **Self Implementing**

Mr. Sylvester stated that most State groundwater monitoring programs require "self-reporting" and groundwater protection cannot always be guaranteed under self-reporting. Exh. 59 at 5. To that end, Mr. Sylvester opined that CCDD facilities should be required to submit groundwater monitoring plans and results to IEPA so that IEPA has the information needed to determine whether groundwater contamination has occurred at a particular site. *Id.* Mr. Sylvester explained that a self-implementing groundwater monitoring program leaves it up to the CCDD owner or operator to decide whether to report exceedances of any applicable regulatory standards. *Id.* Mr. Sylvester also noted that another important consideration is that if results are reported to IEPA, public access to the information is available under the Freedom of Information Act (5 ILCS 140/1 *et seq.*). *Id.*

### **Evidence of Groundwater Impacts at Properly Run Facilities**

Mr. Sylvester expressed concern that from 1997 to 2005, no regulations existed and no permits were issued for CCDD sites in Illinois. Exh. 59 at 6. Mr. Sylvester offered that this was

because in 1997 the General Assembly adopted a new definition for CCDD, “which essentially provided that to the extent provided by federal law, CCDD could be disposed of at a CCDD fill site, without the need for any soil certification, load checking and/or screening.” *Id.* Mr. Sylvester noted that in 2005, the General Assembly enacted Section 22.51 of the Act (415 ILCS 5/22.51 (2014)) that included a requirement that loads be checked with a PID or equivalent device. *Id.* Mr. Sylvester opined that these steps were still insufficient. *Id.* at 7.

Mr. Sylvester maintained that the “lack of effective procedures to identify contaminated materials from 1997 to 2010 highlights the need for groundwater monitoring to detect groundwater contamination from fill material that did not receive the level of pre-disposal scrutiny currently required.” Exh. 59 at 7. Further, Mr. Sylvester indicated that CCDD is not actually “clean” as CCDD by definition may lawfully contain carcinogenic compounds in the form of PNAs, and thus the threat of groundwater contamination will always exist at CCDD facilities. *Id.*

### **Evidence of Contamination at Existing Facilities**

Mr. Sylvester reiterated the need for groundwater monitoring because of the years when facilities were not regulated. Exh. 59 at 8. Mr. Sylvester also provided data from a case involving the deposition of CCDD above grade at a fill site. *Id.* The data demonstrates that Class I groundwater standards were exceeded at the site. *Id.* at 8-10. Mr. Sylvester claimed that based on this data, conceding that the sample size is small, one third of the CCDD facilities show groundwater contamination. *Id.* at 10. Therefore, Mr. Sylvester requested that the Board include groundwater monitoring in the rules. *Id.*

In response to questions at hearing, Mr. Sylvester acknowledged that the facility where the groundwater data were collected closed prior to the adoption of the Board’s rules. Tr. at 92. Mr. Sylvester also conceded that two facilities operating after the Board’s rules were adopted do not exhibit exceedances of groundwater standards. Tr. at 94. Mr. Sylvester also acknowledged that none of the 13 enforcement actions brought by Mr. Sylvester against CCDD facilities has alleged violations of groundwater standards. Tr. at 91.

### **Marvin Traylor, Illinois Asphalt Pavement Association**

Mr. Traylor testified while asking questions of Mr. Sylvester. Tr. at 98-104. Mr. Traylor explained that a refinery breaks down crude oil into products that have a high value and what is left is asphalt cement. Tr. at 99. Asphalt cement holds the rock and sand together for asphalt roads, and it is non-leachable and inert. *Id.* Mr. Traylor provided two studies (Exh. 60 and 61) that support his testimony regarding asphalt. Mr. Traylor testified that there are numerous other national studies that demonstrate that asphalt cement contains no PAHs and no PNAs. *Id.* Mr. Taylor claimed it is a “commonly known fact that asphalt cement is inert and not a threat to the groundwater.” *Id.* at 99-100.

### **IEPA**

IEPA filed testimony (Exh. 63) responding to questions set forth by the Board in an April 18, 2013 hearing officer order (Exh. 52), by the IAAP (Exh. 53), and the People (Exh. 54). The following summarizes those responses.

### **Responses to the Board's Questions**

**Costs of Groundwater Monitoring.** IEPA explained that the cost of design and installation of a groundwater monitoring system when capital funding is obtained through a loan would increase by approximately 5%. Exh. 63 at 8-9. More specifically, the cost would increase from \$0.52 per cubic yard to \$0.60 per cubic yard if the interest rate is 3% per annum, \$0.66 per cubic yard at an interest rate of 5%, and at a 7% interest rate the cost would be \$0.72. *Id.* at 9.

**Parameters to be Monitored.** IEPA responded that after adoption of Part 1100 amendments, IEPA conducted a sampling exercise. Exh. 63 at 9. IEPA stated that one conclusion from this sampling exercise is that even following the procedures of Part 1100, soils with contamination above the MAC are being accepted. *Id.* IEPA stated that at 12 sites either a PID or x-ray fluorescence (XRF) (or both) were used to screen the soil prior to acceptance, inspectors collected samples from those sites, and those samples were analyzed. *Id.* IEPA stated that at 10 of the 12 sites, exceedances of MACs were found. *Id.*

IEPA claimed that because construction or demolition activities may occur almost anywhere, IEPA “cautions against excluding entire categories of contaminants from monitoring requirements”. Exh. 63 at 10. IEPA indicated that the costs for analysis of both volatiles and metals would be \$486. *Id.* As to whether the RCRA metals are based on dissolved concentrations, IEPA said “the short answer is no”. *Id.* IEPA stated while the groundwater standards are based on totals, what is required is determined by the specific program. *Id.* IEPA continued:

Therefore, totals are always required, but some programs such as RCRA also require that dissolved samples be taken in order to statistically assess groundwater. The compliance determination may be made by following the incorporated analytical methods (35 Ill. Adm. Code 620.125), which provide for both totals and dissolved analyses. Exh. 63 at 11.

**Changes to be Made if Groundwater Monitoring is Added.** IEPA suggested revisions to the proposed groundwater monitoring regulations to address concerns about self-reporting. Exh. 63 at 11.

**Front-End Screening.** IEPA supports the continued inclusion of front-end screening requirements even if groundwater monitoring is required. Exh. 63 at 11-12. IEPA indicated it would also accept returning to the source site certification originally proposed by IEPA. *Id.* at 12.

**Self Reporting.** IEPA cannot “guarantee” groundwater protection, but IEPA proposed groundwater monitoring because the “chances of protecting groundwater” are better with monitoring than without monitoring. Exh. 63 at 12. IEPA argued that groundwater monitoring

is the single most effective tool for identifying contamination of groundwater at early stages. *Id.* IEPA stated that self-reporting is the norm on a national basis and it is the only viable option. *Id.* IEPA indicated that “[a]ssuming the groundwater sampling and analysis are performed and documented, the primary concerns about self-reporting would be falsification of records, failure to report an exceedance, or both.” *Id.* at 12-13. IEPA stated it believes that falsification is unlikely to become a problem as falsification is a difficult prospect, given liability and potential violations of the Act. *Id.* at 13.

**Concerns for Groundwater Contamination from CCDD and Uncontaminated Soil Fill.** IEPA indicated that both general and clean construction and demolition debris, including soil, are municipal waste upon generation, but certain fractions of CCDD are excluded when certain conditions are met. Exh. 63 at 13. IEPA explained that to be excluded from waste, soil must be “uncontaminated” and that can mean meeting the criteria in Section 1100.Subpart F (35 Ill. Adm. Code 1100.Subpart F) or that the soil will not pose a threat to human health and safety and the environment. *Id.*, citing 415 ILCS 5/3/160 (2014). IEPA opined that the environment would include groundwater. *Id.*

IEPA further opined that the possible deposition of non-compliant CCDD or uncontaminated soil fill poses a significant threat and that is the impetus behind proposed groundwater monitoring. Exh. 63 at 13. Mr. Clay clarified that the presence of asphalt as a part of CCDD or uncontaminated soil is not the reason IEPA believes groundwater monitoring is necessary. Tr. at 108. IEPA indicated its belief that most facilities are run with due care for compliance; however IEPA’s position is that soils that do not comply with MAC is likely to be accepted as fill. Exh. 63 at 13. This creates a possibility for groundwater contamination and groundwater monitoring is the most effective way to protect groundwater. *Id.* at 14.

**Does Data Provided by LRRRA Influence IEPA’s Views on Requiring Groundwater Monitoring.** IEPA noted that pursuant to an enforcement case, State of Illinois v. J.T. Einoder, groundwater monitoring was ordered for a CCDD disposal site in Lynwood, Illinois (Lynwood Site). Exh. 63 at 14, 24. Mr. Clay testified that the Lynwood Site accepted waste from 1997 to 2003, a time period before the adoption of Part 1100. Tr. at 151. Further, the Lynwood Site accepted materials other than CCDD. *Id.* at 152. Based on the data from those monitoring wells in November of 2012, exceedances of the Part 620 standards were found for arsenic, iron, lead and manganese. *Id.* The well was installed to monitor the leachate found exceedances of the Part 620 standards for iron, lead, and manganese, as well as eight semi-volatile organic chemicals. Exh. 63 at 14, 24 IEPA opined that the “main reason why very little groundwater monitoring data exists” is because permitted facilities are not required to perform groundwater monitoring. *Id.*

IEPA testified that it would not “equate” the results provided by LRRRA on Reliable Lyons from dewatering with sampling and analysis from a dedicated groundwater monitoring system. Exh. 63 at 15. IEPA’s understanding is that operations that pump large volumes of water to create a cone of depression are discharging large amounts of water that do not come in to contact with the fill material. *Id.* IEPA suggested that the dilution from the high volume of draw down “very likely masked detection of contaminants”. *Id.* IEPA also noted that the larger

groundwater analysis excluded volatile contaminants that are more mobile and more likely to be detected. *Id.*

IEPA stated that given the “very limited number of examples and the mixed results”, IEPA is disinclined to change its views on the threat to groundwater. Exh. 63 at 15. IEPA testified that it still supports groundwater monitoring. *Id.*

**Similarity to Other Regulated Materials.** IEPA does not equate CCDD and uncontaminated soils to the characteristics of on-site landfilling, waste-piling, and the storage and handling of pesticides, fertilizers, road oils and deicing agents (activities the Board addressed in Groundwater Protection: Regulations of Existing and New Activities Within Setback Zones and Regulated Recharge Areas; Groundwater Technical Standards: 35 Ill. Adm. Code 601, 615, 616, and 617, R89-5 (Dec. 6, 1991)). Exh. 63 at 15. IEPA is convinced that soil accepted at fill operations will “inevitably include non-compliant soils with the potential to create groundwater contamination”. *Id.* IEPA argued that this conviction justifies the IEPA’s position that the Board should apply groundwater protection at both types of facility in the same manner. *Id.*

IEPA reiterated its claim that in R89-5 the Board concluded that waiting for proof of contamination would defeat the preventative aspects of the groundwater protection policy of the State. Exh. 63 at 15-16, *see also* PC 62 at 14. Even though IEPA does not equate the activities in R89-5 with CCDD and uncontaminated soil fills, IEPA opined that there are some similarities. *Id.* at 16.

**Remediation.** IEPA stated it does not support using Part 742, TACO (35 Ill. Adm. Code 742) in response to contamination from fill operations. Exh. 63 at 16. Rather, IEPA’s proposed corrective action procedures rely on the Part 620 standards and procedures to protect groundwater. *Id.* IEPA opined that the TACO program is not appropriate for fill operations as the TACO methodology requires that the nature and extent of the soil and groundwater contamination must be investigated and defined using sampling and analysis. *Id.* at 17. Further, under TACO the contamination source must be removed and the soil cleaned to the soil objectives. *Id.* IEPA stated that fill operation cannot effectively address the source to stop further contamination. *Id.* at 18.

**Establishment of a Baseline.** IEPA indicated that the establishment of a baseline, as discussed by Mr. Huff (PC 59) clearly is intended to grandfather existing contamination. Exh. 63 at 18. IEPA opined that such an approach is inconsistent with the Groundwater Protection Act and the State’s policy to protect its groundwater resources. *Id.* at 19. IEPA stated:

It would be a poor precedent for the Board to set by adopting rules that excuse prior actions and their consequences that would have been violations of the Act at the time they were committed. By raising the issue of existing contamination at fill operations and expressing his view of the consequences that may result, Mr. Huff has introduced another strong argument for requiring groundwater monitoring at fill operations. *Id.* at 20.

**Costs of Remediation and Establishing a Groundwater Management Zone.** IEPA stated that a groundwater management zone would most likely be established along with a plan to pump and treat groundwater. Exh. 63 at 20. Mr. Cobb stated that the intent of a groundwater management zone is “to mitigate, not just write off groundwater”. Tr. at 127. IEPA continued that while pump and treat might be appropriate, there are other options such as hooking up to an existing safe and reliable source for drinking water. Exh. 63 at 20. IEPA explained that the costs for remediation and establishing a groundwater management zone are dependent on site-specific conditions and may vary substantially from site to site. *Id.* IEPA noted it has provided information on costs of groundwater remediation from sources other than fill operations (PC 62 at 23-29); however, the most cost-effective approach begins with early detection. *Id.*

**Non-Degradation and Appropriateness of Class I Groundwater Quality Standards as Compliance Standards.** IEPA proposed at Section 1100.755 standards for off-site contamination that included a nondegradation provision from Part 620. Exh. 63 at 21. IEPA indicated that Section 1100.755 would allow contamination to the Class I standards onsite. “The principle underlying the proposed use of the non-degradation provision off-site is that the contamination of other people's property should not be authorized by law nor should the rights of those property owners to seek legal redress for such contamination be preemptively limited.” *Id.* IEPA stated that if such contamination occurs, corrective action should include plans to mitigate any impairment to groundwater. *Id.* IEPA proposed the Class I groundwater quality standard as the on-site compliance standard for fill operations because of the relationship to MACs for chemical constituents in uncontaminated soils. *Id.*, *see also* PC 62 at 2,3. IEPA reiterated that it proposed groundwater monitoring as a part of its “multi-barrier approach to preventing groundwater contamination as directed by the legislature.” Exh. 63 at 21. IEPA opined that as a part of the multi-barrier approach requiring compliance with Class I standards operates as a check on the effectiveness of the other protections to ensure the effectiveness of those protections. *Id.* at 22.

**Protection of Class III Groundwater Areas.** IEPA agreed that a setback zone similar to the potable water well setback zone would protect Class III areas. Exh. 63 at 22, 23.

**Setback Zones for Potable Water Supplies.** IEPA indicated that the setback zone restriction applies only to existing potable water wells and noted that there are statutory provisions that should protect against new potable wells being installed within 200 feet of a CCDD or uncontaminated soil fill operation. Exh. 63 at 23. If such a well is installed, IEPA stated that the only recourse an owner or operator has is to report the well to the permitting agency. *Id.*

### **Responses to IAAP Questions**

**Exempt Excavations.** IEPA indicated that Section 1100.101(b)(2) and (b)(3) contain exclusions for certain excavation activities from the CCDD rules. Exh. 63 at 1. Those sections exclude:

- 2) The use of CCDD or uncontaminated soil as fill material in a current or former quarry, mine, or other excavation located on the site where the CCDD or uncontaminated soil was generated;
- 3) The use of CCDD or uncontaminated soil as fill material in an excavation other than a current or former quarry or mine if the use complies with Illinois Department of Transportation specifications. 35 Ill. Adm. Code 1100.101(b)(2) and (b)(3).

The IEPA also explained that a facility in Madison County, Maclair Asphalt Sales L.L.C. (Maclair) involves a Illinois Department of Transportation (IDOT) borrow pit on the Maclair property. Exh. 63 at 1, *see also* Exh. 65. That particular facility is exempt based on a recent consent order and is subject to limitations. *Id.* at 2.

Mr. Clay testified that borrow pit operators can take CCDD from IDOT, or a county or municipal job, and not have a permit from IEPA as long as the material is uncontaminated. Tr. at 136-37. Mr. Clay explained that an IDOT, municipal, or county engineer would have to sign off that the material is uncontaminated, but they would not have to be a professional engineer. *Id.* at 137. However, the borrow pit operator would not have to test the material or have a permit from IEPA. *Id.* Mr. Clay reminded that this is a statutory exemption and these borrow pits are not subject to the Part 1100 rules. *Id.* at 139.

**Why Exempt.** IEPA explained that the exemptions in Sections 1100.101(b)(2) and (b)(3) are derived from Section 22.51(b)(4)(B) and the process is overseen by engineers in accordance with IDOT specifications. Exh. 63 at 2-8. Mr. Clay testified that the proposed groundwater monitoring requirements would not apply to these sites. Tr. at 131.

### **Responses to the People's Questions**

**Evidence of Impact on Groundwater From CCDD Facilities.** IEPA noted that pursuant to an enforcement case, State of Illinois v. J.T. Einoder, groundwater monitoring was ordered for a CCDD disposal site in Lynwood, Illinois. Exh. 63 at 14, 24. Based on the data from those monitoring wells in November of 2012, exceedances of the Part 620 standards were found for arsenic, iron, lead and manganese. *Id.* The well installed to monitor the leachate found exceedances of the Part 620 standards for iron, lead, and manganese, as well as eight semi-volatile organic chemicals. *Id.* IEPA opined that the “main reason why very little groundwater monitoring data exists” is because permitted facilities are not required to perform groundwater monitoring. *Id.*

**Impact of Amendments on Protection of Groundwater at Sites Accepting Fill from 1997 to 2010.** IEPA explained that the amendments to Part 1100 are not retroactive and thus have no limiting effect on soil accepted prior to 1997. Exh. 63 at 24. Likewise, IEPA testified that the regulations have no impact on noncompliant soils accepted at fill sites and do not pertain to asphalt that is a part of CCDD. *Id.* at 25.

**Limiting Frequency of Groundwater Monitoring.** IEPA stated that CCDD and uncontaminated soil used as fill at sites regulated under the Part 1100 rules are not wastes as long as they meet the conditions for exemption from classification as waste. Exh. 63 at 25. IEPA further stated that it and the Board were directed by the legislature to ensure that groundwater would be protected and IEPA believes the certification and testing requirements will work to exclude non-compliant materials to a significant extent but not completely. *Id.* IEPA opined that the potential to cause groundwater contamination will remain and groundwater monitoring is the only reliable way to address that threat. *Id.*

IEPA opined that groundwater monitoring requirements, similar to those for inert landfills, were not necessary considering the potential threat to groundwater. Exh. 63 at 25. Annual sampling was determined to be the least expensive that would allow for compliance demonstration and annual sampling takes into consideration the front-end screening. *Id.*

**60-Day Reporting Requirement for Exceedances.** IEPA noted that the proposed 60-day requirement starts from when the sample is taken. Exh. 63 at 26. IEPA acknowledged that the inert landfill waste rules require reporting within one business day, but IEPA interprets that as being one business day from when the results are received. *Id.* The 60-day requirement in Part 1100 allows time for sending the sample to the lab and for results to be received. *Id.*

**Corrective Action.** IEPA stated that when it is determined that corrective action is required, the facility will be required to develop and implement a plan under the supervision of a licensed professional engineer. Exh. 63 at 26. IEPA field inspectors will verify that the plan is proceeding during routine inspections. *Id.* The IEPA will not review the plan, but the plan will be submitted to IEPA, and IEPA will review reports and perform inspections. *Id.* at 26-27.

**Alternative Non-Compliance Plan.** IEPA responded to questions regarding timing and incentives for providing an alternative non-compliance plan. Exh. 63 at 27. IEPA indicated that the timing was necessary to accomplish the steps necessary and the incentive will be cost savings. *Id.*

**NPDES Permit Modification to Monitor for All Constituents.** IEPA responded that it is not necessary to require NPDES monitoring for all constituents as an applicant must fully characterize the pollutants in the wastewater. Exh. 63 at 28. Based on a technical review, IEPA establishes discharge limitations and monitoring. *Id.*

### **Other Jurisdictions**

Mr. Nightingale testified that at one point, IEPA searched other states to determine what might be regulated with CCDD and uncontaminated soil fill. Tr. at 153. Mr. Nightingale explained that no other state was regulating CCDD and uncontaminated soil fill quite like Illinois. *Id.* Mr. Nightingale noted that other states did not have groundwater monitoring and nothing proposed by IEPA would conflict with USEPA's requirements. *Id.* at 154.

### **Illinois Association of Aggregate Producers**

**Mr. Bret Hall, Hanson Material Service**

Mr. Bret Hall stated that he worked for Hanson Material Service (Hanson) and has been involved with Hanson's CCDD facilities for 13 years. Tr. at 172. Mr. Henriksen asked Mr. Hall if he was aware of the Hanson site as depicted on the map of Will County provided by Mr. Cravens. *Id.* Mr. Hall said that he was aware of the map but that the location of the Hanson facility was incorrectly depicted. Tr. at 172, 173. He elaborated by saying the map depicts the Hanson facility as being on the west side of the Des Plaines River, when it is actually located on the east side of the river, a difference of approximately a quarter mile. Tr. at 173. Mr. Hall stated that the reason this difference is significant is that there are wells on the west side of Route 53, and the map indicates the Hanson facility is directly adjacent to these wells, which is not the case. Tr. at 173, 174.

Mr. Hall explained that he had been involved with Hanson's CCDD facility prior to the development of the Part 1100 rules and participated with the aggregate industry's efforts to develop best management practices. Tr. at 175. At that time, Hanson used a PID and screened every load. Mr. Hall reported that he also implemented the Part 1100 rules once they were adopted. *Id.* He was asked whether he believed the Part 1100 rules provided adequate groundwater protection, and Mr. Hall responded that "they are quite adequate". Tr. at 176. He elaborated to say that they conduct site inspections to ensure they have analytical data, which demonstrates they "meet or fall below the maximum level of concentrations for chemical constituents and uncontaminated soil". *Id.*

Mr. Hall was also asked about concerns regarding the liability for groundwater monitoring test results that might stem from pollution caused by off-site sources. Tr. at 176. He responded by saying that this is "of a much greater concern, even, than the upfront costs". *Id.* Mr. Hall stated that this liability concern is one reason that Hanson is concerned by having to install groundwater monitoring wells. Tr. at 177.

The question was raised as to whether Mr. Hall was aware that IEPA has said that CCDD material can be deposited in farm fields and naturally occurring depressions and that these sites are not regulated. Tr. at 177. Mr. Hall was aware of this and that CCDD can be disposed of in unregulated borrow pits as well. *Id.* Mr. Hall stated that he did not know how, without the controls required of CCDD sites, that these unregulated sites can avoid the contaminants they are able to. Tr. at 178.

**Mr. Josh Quinn, Vulcan Materials**

Mr. Josh Quinn stated that he is a Principal Environmental Specialist for Vulcan Materials and has been involved in the CCDD issue associated with the aggregate industry for 12 years. Tr. at 179, 180. He stated that he was responsible for compliance monitoring for all aspects of all CCDD and registered uncontaminated soil fill sites and had been involved in the development of the aggregate industry's best management practices to handle CCDD. Tr. at 180.

Mr. Quinn also stated that he was involved with the development of the Part 1100 rules, which, in his professional opinion, “provide adequate protection to the environment.” Tr. at 180.

Mr. Quinn was asked if he and his company, Vulcan Materials, had concerns that “groundwater monitoring test results may not be indicative of our contribution through our CCDD or soil fill only operations”. Tr. at 181. He elaborated to say that monitoring may detect contaminants from sites that have nothing to do with their facility. *Id.*

Finally, Mr. Quinn was asked if he was aware of CCDD being dumped in farm fields without any regulations, as long as the CCDD does not exceed grade. Tr. at 181. He stated “there is an elevated and concerning risk with the unregulated CCDD disposal in farm fields, or IDOT, county, or municipal borrow pits.” *Id.*

### **John Henriksen**

Mr. Henriksen responded to a question as to why CCDD fill operations should not be required to conduct groundwater monitoring by stating that the “General Assembly specifically did not mention groundwater monitoring, and they did that for a reason”. Tr. at 187. Mr. Henriksen elaborated by saying that it was not the intent of the General Assembly to require groundwater monitoring at uncontaminated soil fill operations and that the aggregate industry can and does accept upfront controls at CCDD facilities to ensure groundwater is not impacted. Tr. at 188. He opined that the “more you tighten up on our industry beyond the due diligence we’ve put in place”, the more likely it is to drive us out of business. *Id.*

Mr. Henriksen noted that as CCDD sites close, the material is still going to be generated, all of which has to be disposed of somewhere. Tr. at 189. The material will be disposed of in a solid waste facility, which is more costly, or be deposited in “farm fields, forest preserve districts” or borrow pits, which are unregulated. Mr. Henriksen argued that IEPA and the Board need to impose reasonable requirements on CCDD fill operations, and that the Part 1100 rules do a good job at protecting groundwater. *Id.* He also noted that the small number of existing CCDD facilities “have an enormous regulatory burden on them, a burden that’s not reflected in any state in the nation” and yet, IEPA wants to add additional burdens. Tr. at 190.

### **POST-HEARING PUBLIC COMMENTS**

At the close of hearing, the hearing officer set forth by hearing officer order a series of questions from the hearing. Hearing Officer Order (June 12, 2013). The hearing officer also set a comment period to end on August 1, 2013. *Id.* Below the Board summarizes the comments and responses to questions.

#### **VCNA Prairie, Inc. (PC 67)**

VCNA Prairie, Inc. (Prairie) submitted post-hearing comments by Mr. Richard Olsen, President and Mr. Michael Pratt, General Manager, Aggregate Division. PC 67 at 1, 2. Prairie was founded in 1948 in Bridgeview, Illinois and currently operates four permitted CCDD fill

operations. Prairie noted that it has been involved in the development of legislation, regulations, and best management practices for CCDD with IEPA since 1998.

Prairie expressed “full support of the elimination of groundwater monitoring”. PC 67 at 1. Prairie noted the testimony of LRRRA (Exh. 57) at the May 20, 2013 hearing, where LRRRA identified a cost of \$471,000 for Bluff City Materials for installing groundwater monitoring wells and developing a groundwater model for their facility. While Prairie stated that it had not implemented a groundwater monitoring program for any of its CCDD facilities, “it is clear that the direct costs to Prairie would be cause to reconsider our continued acceptance of CCDD”. *Id.* Prairie opined that their cost to implement a groundwater monitoring program would exceed \$1,884,000, which would be borne by Illinois taxpayers. *Id.*

Prairie reported testimony by Claire Manning from the March 14, 2012 hearing where the disposal costs for uncontaminated soil at a landfill for twenty Chicago Public Building Commission (CPBC) projects was estimated at \$20.6 million, while disposal at a permitted CCDD facility would be approximately \$5.7 million. PC 67 at 1, *referring to* Exh. 50. Prairie stated that similar figures existed for IDOT and the Chicago Department of Transportation. Prairie opined that “it is not unreasonable to extrapolate the CPBC numbers and recognize that well over \$100 million would be spent unnecessarily on an annual basis for disposal of CCDD and uncontaminated soil at a municipal landfill”. *Id.*

Prairie explained the cost effective cycle that is repeated throughout a construction project. PC 67 at 1. Commercial trucks are loaded with CCDD or uncontaminated soil and hauled to a quarry or gravel pit regulated by IEPA where the material is placed for reclamation. Often, the same truck is loaded with aggregate material and returns to the work site. This process reduces the number of trucks on the road, thereby reducing fuel consumption and wear and tear on roadways. *Id.*

Prairie noted that since Part 1100 has been in effect, it has witnessed an increased number of unregulated CCDD disposal options being available. PC 67 at 2. This includes farm fields, construction sites, valleys, and ditches, none of which are required to be permitted by the State or local municipalities. Prairie opined that the material accepted at these unregulated sites is not screened to confirm that it is uncontaminated. *Id.* Prairie warned that “the true risk to groundwater quality is this unregulated and unmonitored placement of CCDD occurring throughout the State”. Imposing “overly burdensome requirements on permitted and registered sites” will cause many of these sites to cease operation, thus increasing the amount of materials being disposed of at unregulated sites. *Id.*

### **Sexton Properties (PC 68)**

Mr. Todd Daniels, Director of Operations, submitted comments to the Board on behalf of Sexton Properties, R.P., LLC,. PC 68 at 1. Sexton reported that it owns a CCDD facility in Richton Park, Illinois that consists of 81 acres. This facility has been in operation since October 2004, which is prior to the original permitting regulations for CCDD operations in Part 1100. *Id.*

Sexton argued that requiring groundwater monitoring is unnecessary and will drive many CCDD operators out of business. PC 68 at 1. Sexton agreed with the Board’s conclusion to not require groundwater monitoring at CCDD and uncontaminated soil fill sites. Sexton argued that “the economics of running a CCDD facility in Illinois cannot justify the added – and we believe unnecessary – costs of operating a groundwater monitoring system”. *Id.* In fact, Sexton speculated that if such monitoring is required, it will “likely be forced to prematurely close the CCDD operation at the Richton Park facility”. *Id.*

Sexton observed that the data submitted to the Board regarding whether CCDD operations affect groundwater were all collected “*before the implementation*” of the more stringent requirements. PC 68 at 2 (emphasis in original). Sexton further noted that IEPA’s proposed language in “Subpart G assumes the failure of these procedures”. Sexton argues that before the Board adopts a groundwater monitoring requirement, it should have a record stating that “not only that the front-end controls do not work but that they fail to such a degree that a threat to the environment is presented”. *Id.*

Sexton reminded that CCDD and uncontaminated soil are not wastes and that the Board’s regulations impose qualitative and quantitative standards to ensure that these materials are in fact clean. PC 68 at 2. Sexton also noted that requiring groundwater monitoring at uncontaminated soil fill operations “creates an inherent contradiction with the Site Remediation Program”. *Id.* Sexton explained that when an owner of a contaminated site achieves the Tier 1 TACO standards, the owner receives a “no further remediation” letter, but when an owner of an uncontaminated soil fill operation achieves the same soil standards, the owner is subjected to groundwater monitoring. *Id.* at 2 and 3. Sexton opined that “[f]or the state’s environmental program to have integrity, soil meeting the designated Tier 1 standards must be considered clean and thus warranting no further remediation under both the Site Remediation Program *and* CCDD regulations”. *Id.* at 3.

### **Illinois Association of Aggregate Producers (PC 69)**

John Henriksen, Executive Director of IAAP, submitted comments on behalf of IAAP. PC 69 at 1. IAAP provided an overview of the historical development of the clean fill industry and clean fill legislation, “in order to put into context the aggregate industry’s current opposition to groundwater monitoring” at CCDD or uncontaminated soil fill sites. *Id.*

IAAP represents companies that “mine and produce crushed stone, sand, gravel, silica sand and agricultural lime”, or “aggregates”. PC 69 at 1. In addition to producing aggregates, IAAP noted that some companies have accepted CCDD as fill to “accelerate the reclamation of excavations generated by mining”. Aggregate mines “have historically charged only nominal fees for clean fill disposal in comparison to the high tipping fees for these materials assessed by solid waste landfills”. *Id.*

IAAP opined that “as the State’s regulatory oversight of clean fill sites has intensified, the number of Illinois pits and quarries accepting these materials has steadily declined”. PC 69 at 1. Because these sites “provide an economical way to handle materials that cannot be incorporated into building sites, the costs have increased for all sectors of the construction

industries”. *Id.* at 1 and 2. Materials not accepted at one of these sites are required to be taken to a solid waste landfill or are “dumped at a non-regulated site”. *Id.* at 2.

### **History of CCDD Legislation**

IAAP noted that until 1997 there was little oversight of clean construction or demolition debris because these materials were not classified as “wastes” by the Act. PC 69 at 2. However, because of “environmental pollution issues associated with illegal dump sites”, the Act was amended on August 17, 1997 to separate construction materials into “General” and “Clean”. Clean CCD could still be accepted as long as they were placed at or below grade and then covered. General CCD would have to be disposed of at a solid waste landfill, which was subject to groundwater monitoring requirements, or sent to a recycling facility, which was required to “control, manage, and dispose of any storm water runoff and leachate generated at the facility”. *Id.*

IAAP further explained that the Act was amended again on January 1, 1998 to require sites accepting either General or Clean CCD to maintain records of the materials it received. PC 69 at 2. IAAP opined that these legislative changes were a result of “rogue fill site operators who knowingly accepted waste materials instead of clean fill”. IAAP emphasized the fact that neither the 1997 nor the 1998 IEPA-supported legislative changes required groundwater monitoring. *Id.*

In 1999, IAAP began discussions with IEPA regarding “voluntary best management practices for aggregate mines that accept CCDD”. PC 69 at 2. This was due to the increasing concerns by aggregate producers that “they might become subject to burdensome regulatory oversight due to the actions of illegal fill site operators”. The IAAP best management practices for clean fill were endorsed by IEPA on July 13, 2004. *Id.* IAAP noted that IEPA noted that these voluntary guidelines went “beyond compliance” and yet did not include groundwater monitoring requirements. PC 69 at 3.

IAAP continued by noting that on July 19, 2005, legislation authorized a “more rigorous regulatory scheme for the disposal of CCDD”. PC 69 at 3. IAAP noted that this legislation was not an IEPA initiative and was enacted in response to an operator who accepted general CCD at an abandoned quarry. This new legislation required the Board to adopt regulations that would include standards for CCDD fill operations. IAAP explained that IAAP worked with IEPA to develop “a workable regulatory system for CCDD operations”, which “created the first comprehensive scheme for CCDD disposal”. *Id.*

It was during the Board’s rulemaking proceedings for Part 1100, IAAP explained, that the Attorney General’s Office provided comments suggesting that the “clean fill rules should contain groundwater monitoring”. PC 69 at 3. IAAP further noted that the Board “rejected this argument noting that the groundwater monitoring regimes cited by the OAG were appropriate for inert waste landfills that accept General CCDD” and not for those accepting CCDD. IAAP stated that IEPA “had never recommended – let alone required – groundwater monitoring at CCDD disposal sites”. *Id.* IAAP summarized by stating that the 2005 legislative changes for a more rigorous scheme to regulate CCDD was not an IEPA initiative, and that IEPA “has never

recorded a groundwater violation associated with sites regulated under Part 1100”; therefore, IAAP concluded that IEPA’s “prior decision not to impose this regulatory burden upon the clean fill industry was correct”. *Id.*

IAAP discussed changes adopted by the General Assembly in 2010. PC 69 at 4. These changes were a result of concerns by a group of fill site operators that claimed existing law did not provide a clear definition of “uncontaminated soil” that could be accepted at CCDD sites. This new legislation required the Board to adopt rules that established maximum concentrations of contaminants that could be present in “uncontaminated soil”. *Id.* IAAP also noted the new legislation required the Board to adopt “standards and procedures necessary to protect groundwater”. In 2001, IEPA filed proposed rules that included a groundwater monitoring program in Part 1100, Subpart G. *Id.*

### **Rejection of Groundwater Monitoring**

After “significant written and oral testimony”, IAAP stated, “the Board issued an order approving amendments to Part 1100” but rejected Subpart G requiring groundwater. PC 69 at 4. IAAP quoted the Board as saying “the statutory directive to protect groundwater does not equate to requiring groundwater monitoring”. IAAP reminded that the Board affirmed this decision at second notice. *Id.* IAAP argued that this “was correct given the lack of any new arguments or relevant evidence submitted during this proceeding in support of groundwater monitoring”. *Id.*

IAAP noted that the recurring argument provided in this proceeding to support groundwater monitoring was “due to the alleged **potential** for groundwater pollution from CCDD and uncontaminated soil fill sites notwithstanding implementation of the certification and load checking program”. PC 69 at 4 (emphasis in original). IEPA used the Board’s rules at R 89-5, which imposed groundwater monitoring at facilities handling pesticides and fertilizers, as an argument in favor of requiring groundwater monitoring. *Id.* at 5. IAAP opined that this requirement for sites regulated under Parts 615 and 616 were justified because the materials were “**certain** to pollute groundwater, if released”, as compared to the “**low potential** for groundwater pollution given the mandated certification and load checking program for soil accepted as fill”. *Id.* (emphasis in the original).

IAAP members were accepting “clean construction and demolition debris for use as fill in 1987 and continue to do so today at the 49 permitted CCDD and 19 permitted uncontaminated soil fill operations regulated” by IEPA. PC 69 at 5. IAAP opined that the focus by IEPA on requiring groundwater monitoring is difficult to understand “given the proliferation of unregulated “clean fill” dumps scattered throughout Illinois”. *Id.* As an example, IAAP noted that CCDD or uncontaminated soil from certain road projects are allowed to be deposited in pits without load checking or groundwater monitoring although IDOT specifications are required to be met. *Id.* at 6. In addition, IAAP explained that CCDD material “can be dumped in any farm field, ravine, or low lying area without obtaining an Agency permit or even registering with the Agency, as long as the material is placed below grade”. IAAP argued that these unregulated sites have none of the controls provided within IDOT specifications, no “upfront testing, certification and load checking controls set forth in Section 1100.205, and no groundwater monitoring”. *Id.*

IAAP argued that “the only groundwater monitoring results in the record taken from sites regulated under Part 1100...show no pollution has occurred”. PC 69 at 7. IAAP concluded by stating that “the comprehensive CCDD and uncontaminated soil fill regulatory scheme approved by the Board is reasonable and adequately protects the environment from air, land and water pollution”. IAAP further argued that to require “these sites to also implement the Subpart G groundwater monitoring program is a costly and unreasonable addition to the regulatory burden already accepted by CCDD and uncontaminated soil fill sites – a burden not shared by the thousands of unregulated “clean fill” sites located throughout Illinois”. *Id.* IAAP closed by stating the Board’s decision to reject groundwater monitoring “was correct when issued and remains correct given the lack of any new arguments or relevant evidence to the contrary offered in this proceeding”. *Id.*

### **Land Reclamation & Recycling Association (PC 70)**

LRRA responded to questions raised at hearing in a final comment. The first question responded to was a question regarding the relationship of MACs to pH, and LRRA asked that the maximum pH be raised to 12.5 to allow for disposal of soil containing limestone aggregate. PC 70 at 1.

LRRA also responded to a question concerning other states’ regulations for CCDD and whether or not groundwater monitoring was required. LRRA indicated its research found that Pennsylvania has rules similar to Illinois and once soil is certified as “clean” there are no restrictions on placement. PC 70 at 2.

### **James E. Huff, Huff & Huff, Inc. (PC 71)**

Mr. Huff submitted post-hearing comments to the Board where he addressed four questions related to the issue as to whether groundwater monitoring wells should be required at CCDD fill operations. PC 71 at 1. He also identified three issues unrelated to groundwater monitoring where he asked the Board to amend the existing regulations. *Id.*

### **Cost of Groundwater Monitoring**

Mr. Huff noted that the cost is a “function of the number of monitoring wells that will be required to delineate the vertical and horizontal extent of any groundwater impact”. PC 71 at 1. Mr. Huff reminded that the Board received information on the actual costs of a monitoring well network, with modeling, that were significant as well as figures submitted by IEPA that were significantly cheaper. *Id.* Mr. Huff asked IEPA whether four monitoring wells would be sufficient, and received what he referred to as a vague answer. *Id.* Based on this response, Mr. Huff suggested that “budgeting for eight monitoring wells would likely represent closer to the norm”. *Id.* at 2.

### **Parameters to Be Monitored**

Mr. Huff noted that he raised this question in his Pre-filed Supplemental Testimony, but information provided by IEPA at the hearing provided little clarity. Mr. Huff argued that

confusion exists as to whether total or dissolved metals are to be included, what the role of sediment is, and what approach is to be used for testing. PC 71 at 2. Mr. Huff raised the question as to why running the test for total metals is necessary, presuming the statistics approach can be used to establish compliance, as suggested by IEPA. Mr. Huff opined that the Board could provide clarity to this in the regulations and “avoid the costs of false positives due to sediment”. *Id.*

### **Potential Closing of Facilities**

Mr. Huff addressed whether the “economic burden of groundwater monitoring or the prospect of remediation result in a significant number of CCDD fill sites discontinuing accepting clean fill”. PC 71 at 2. In Mr. Huff’s earlier testimony, he expressed concern that a large number of CCDD operations would close before installing monitoring wells, which would result in a huge financial burden to construction projects. Mr. Huff stated that his concerns were not related to the costs of the monitoring wells or sampling, but continues to be with “the parameters being monitored and pre-existing conditions”. *Id.*

One concern Mr. Huff raised was the ability to use groundwater management zones if contamination was found. PC 71 at 3. IEPA staff suggested a groundwater management zone was to “mitigate an impairment, not just right up front put a restrictive use ordinance in and automatically write groundwater off”. *Id.* at 3 and 4. Mr. Huff opined that CCDD fill sites would be required to actively treat groundwater before pursuing a groundwater management zone, unlike LUST sites and those enrolled in the Site Remediation Program, which can rely on groundwater use restrictions. *Id.* at 4.

Mr. Huff identified additional reasons groundwater monitoring requirements may lead to the closure of CCDD fill sites. PC 71 at 4. These include the insufficient time allowed in the regulations to investigate an exceedance and develop a plan and the time required for IEPA to issue an NPDES permit. Mr. Huff also noted that as the regulations are now written, “every facility with an exceedance will be out-of-compliance before corrective actions can be implemented, and thus subject to potential enforcement actions”. Mr. Huff opined that “Discontinuing accepting uncontaminated soil and not installing monitoring wells is clearly the option that the industry will take.” *Id.*

### **Unregulated Fill Operations**

Mr. Huff discussed whether the economic burden of groundwater monitoring will drive generators to use unregulated fill operations where there is no oversight by IEPA. PC 71 at 5. Mr. Huff reminded the Board of comments provided by Mr. Henriksen, who had noted there are alternatives to taking CCDD and uncontaminated soil fill to regulated facilities. These include “farm fields, forest preserves and borrow pits that are virtually unregulated”. Mr. Huff asserted that the “disposition of uncontaminated soil is almost always left to the contractors”, and because contractors are selected based on price, “they will utilize the low cost disposal option”. Mr. Huff opined that the requirements of Part 1100 put CCDD facilities at a competitive cost disadvantage and by requiring groundwater monitoring “this disparity will increase for those facilities that remain in the business of accepting uncontaminated soil”. *Id.*

### **Issues Unrelated to Groundwater**

Mr. Huff raised three issues unrelated to groundwater monitoring where he asked the Board to amend the existing regulations. PC 71 at 5. The first is that there is no technical basis for an upper pH limit of 9.0, which he discussed in his response to the Board's Pre-filed Question. The second is that the "no deflection criteria on the PID meter has caused a significant number of rejected loads, many before they are even transported to the CCDD facilities". He noted that IEPA had promised to respond to the PID threshold for rejection. The third issue raised by Mr. Huff is the recommendation for the Board to codify the MACs in the regulations, which he discussed in his Pre-filed Supplemental Testimony. *Id.*

### **Will County Land Use Department, Resource Recovery & Energy Division (PC 72)**

Dean Olson, Director of the Resource Recovery & Energy Division, Will County Land Use Department, submitted responses to some of the questions posed by the Board in its June 12, 2013 Hearing Officer Order.

In response to the question as to whether background levels should be established for all wells or just upgradient wells, assuming groundwater monitoring is required, Mr. Olson stated that "all monitoring wells should have four quarters of background levels established for all required groundwater monitoring parameters". PC 72 at 1. Mr. Olson opined that this is because downgradient or upgradient is not always easily determined, and groundwater flow can change seasonally. Also, obtaining four quarters of background levels allows for the use of "intra-well statistical analysis, if necessary". *Id.*

Mr. Olson responded to the Board's question of whether a site would only need four groundwater monitoring wells. PC 72 at 1. He stated that four monitoring wells would be appropriate "for a CCDD site with a clearly apparent groundwater flow direction". In this case, Mr. Olson states that one upgradient and three downgradient wells would suffice. *Id.*

In response to the Board's question regarding the range of costs estimates for establishing a groundwater monitoring network, Mr. Olson referenced a Chicago Sun-Times article that indicated a CCDD site in Will County had sold for \$17.7 million. PC 72 at 2. Mr. Olson opined that if a CCDD site would be worth this amount, "it indicates that a significant amount of profit is anticipated by the operator". Mr. Olson, therefore, found it difficult to understand "why a CCDD owner or operator cannot afford to install a groundwater monitoring system and sample groundwater". *Id.* Mr. Olson reiterated Will County's groundwater consultant's cost estimates to implement a groundwater monitoring system as applied to four sites in Will County (PC 55, Exh. 53 at 3). The costs per cubic yard ranged from \$0.05 to \$0.16. The total cost Mr. Olson provided for all four sites was \$156,399 for well installation and ranged from \$58,048 to \$1,036,389 in annual costs for monitoring at facilities with an operating life of 3 to 33 years. *Id.*, referring to PC 55, Exh. 53 at 3.

The Board asked how many of the nine facilities shown on the map of Will County provided by Mr. Cravens in his testimony are now accepting CCDD or uncontaminated soil. PC

72 at 1. Mr. Olson responded by indicating nine CCDD sites accept material in Will County, and one site accepts uncontaminated soil fill. He further explained that it was his understanding that three CCDD sites are being mined and dewatered. *Id.*

In response to the Board's question as to whether it should consider raising the PID response value to 5.0 ppm as suggested in Mr. Huff's testimony, Mr. Olson stated that "Will County would not be in agreement with an increase in the PID response value to 5.0 ppm". PC 72 at 1. Mr. Olson elaborated by suggesting that "Any increase in contaminant acceptance criteria should be accompanied by the addition of an appropriate environmental protection system, such as a liner system". *Id.*

### **Citizens Against Ruining the Environment (PC 73)**

CARE urged the Board to "adopt groundwater monitoring requirements for CCDD and uncontaminated soil fill facilities in order to act consistently with the legislative mandate, the evidence in the record, and the well-being of Illinois residents, who, like CARE members, rely on groundwater for their drinking water". PC 73 at 1. CARE provided five specific comments to the Board.

#### **Current Regulations Insufficient**

CARE contended that current regulations cannot ensure compliance with the proper disposal of CCDD materials. PC 73 at 1. CARE noted that it has identified 175 enforcement actions by IEPA since 2002 for violations of existing standards at CCDD sites. *Id.* Since Part 1100 regulations have been in effect, the People have filed 11 enforcement actions against CCDD disposal owners or operators. *Id.* at 1 and 2. CARE provided details for five such enforcement cases. CARE stated that these violations were for the deposition of general or clean construction or demolition debris and the open dumping of waste in a manner resulting in litter. *Id.* at 2, 3, 4, 5.

CARE argued that these five cases, in addition to the hundreds of other violations identified by CARE or the People, "illustrate that failure to comply with regulations is quite common in the CCDD disposal industry". PC 73 at 5. CARE further argued that even after the new requirements for soil certification were adopted, the People filed two enforcement actions against uncontaminated soil fill facilities for violating the regulations. CARE opined that this "unrelenting continuing history of non-compliance forms the context for the [I]EPA, the Illinois Attorney General, Will County, and CARE to assert the necessity of groundwater monitoring at CCDD and [uncontaminated soil fill] facilities". *Id.* at 5 and 6.

#### **First Indication of Contamination**

CARE argued that without groundwater monitoring, "the first indication of groundwater contamination will be in public and private wells supplying potable water to Illinois residents". PC 73 at 6. CARE reported that there are nine CCDD facilities within Will County that have the "potential to contaminate this shallow aquifer and the groundwater that thousands of Will County residents rely on". *Id.* at 5 and 6. CARE stated that groundwater monitoring will allow

facility operators to detect releases before they affect potable water sources. *Id.* at 7. In addition, CARE opined that groundwater monitoring will “provide a present day baseline of groundwater conditions that will allow facility operators to evaluate impacts (or confirm the lack of impacts) over time”. CARE further opined that if groundwater monitoring fails to detect releases over time, the Board can “revisit this issue on a rulemaking Petition”. *Id.* at 7.

### **Cost of Groundwater Monitoring**

CARE argued that the cost of groundwater monitoring at CCDD facilities is “reasonable, particularly when balanced against the detrimental impact of undetected, contaminated groundwater resources”. PC 73 at 8. CARE challenged the claim that CCDD facilities may choose to close rather than absorb the costs of groundwater monitoring as overstated. *Id.* In addition, CARE argued that the costs of groundwater monitoring should not be the basis for the Board to deny the requests by IEPA, the People, Will County and CARE for regulations requiring groundwater monitoring. *Id.* at 9.

### **Self-Implementation**

CARE stated that self-implementation of monitoring is insufficient, and groundwater monitoring plans and resulting data should be submitted to IEPA, although IEPA did not include this requirement in its proposed regulations. PC 73 at 9. CARE opined that “a self-reporting system is essentially the same as having no groundwater monitoring at all”. CARE further argued that this issue should be examined “in light of the unrelenting history of non-compliance in the CCDD disposal industry”. *Id.* The same facilities that do not comply with regulations regarding CCDD disposal are also not likely to comply with regulations to report exceedances. *Id.* CARE, the People, and Will County agreed that the public must have access to groundwater monitoring data, which means the data must be submitted to IEPA.

### **Front-End Screening**

CARE argued that even if groundwater monitoring is required, front-end screening of materials disposed of at CCDD facilities must be continued. PC 73 at 10. CARE opined that groundwater monitoring, “acting in combination with front-end screening, provides the best opportunity to protect citizens who use groundwater as their main source of drinking water”. *Id.* CARE concluded by reiterating its request that the Board implement groundwater monitoring requirements for CCDD facilities to ensure the protection of groundwater resources and to “act in accordance with the mandate of the General Assembly”. *Id.*

### **Illinois Environmental Protection Agency (PC 74)**

IEPA addressed the importance of groundwater monitoring and answered questions raised at the May 20, 2013 hearing. PC 74 at 1. IEPA contended that the Board’s adoption of groundwater monitoring requirements for fill operations is “essential if compliance is to be achieved with the state’s long-standing policy of restoring, protecting and enhancing the groundwater of the state as a natural and public resource”. *Id.* IEPA further argued that there is “simply no question of the legislative intent to protect the state’s groundwater resources

primarily by the prevention of groundwater contamination”. *Id.* at 2 (emphasis in original). IEPA cited both the Act and Groundwater Protection Act to support its argument. *Id.*

### **Front-End Screening**

While IEPA stated that it appreciated the Board adopting the health-based MACs and agreed that the strengthened screening requirements will likely exclude more contaminated soils from fill operations, it does not believe these provisions are adequate to protect groundwater. PC 74 at 3. IEPA argued that it is “convinced that only groundwater monitoring can provide the information necessary to fully understand and evaluate the threat to fill operations”. IEPA further stated that without groundwater monitoring, there will be no mechanism to identify groundwater contamination at an early stage to take preventive action. *Id.*

According to IEPA, the “potential for fill operations to cause groundwater contamination is undeniable”, even with the screening requirements adopted. PC 74 at 4. IEPA presented evidence to support this argument. *Id.* at 5, *referring to* Exh. 63 at 9. In sampling conducted in 2012, IEPA reported that it identified exceedances of the MACs and/or the pH limits at ten of twelve CCDD facilities. IEPA further noted that Mr. Hock testified to the fact that he had found seven incidents of PNAs above the proposed MACs in 44 samples taken from 44 borings. *Id.* Lastly, IEPA reported that it had reviewed the 417 rejection sheets it received from fill operations from September 2012 through June 2013 and found that 64.5% or 269 were rejected because of PID readings ranging from a low of 0.1 ppm to 185 ppm. *Id.* at 6. A PID reading in excess of the calibration level does not identify the specific volatiles detected or the concentrations, so any exceedance of a MAC cannot be confirmed. *Id.*

IEPA argued that the above examples demonstrate how limited the front-end screening process can be. PC 74 at 6. In addition, IEPA noted that this is compounded by the fact that source site owner/operators are allowed to self-certify when the property is not a potentially impacted property. As an example, IEPA provided figures reported by IAAP from 2010 through 2012 from four fill sites in northeastern Illinois. *Id.* Self-certifications ranged from 53% to 84.5% of the total soil certifications accepted at these four facilities. *Id.* at 7. This demonstrates, according to IEPA, that the majority of soil going to these fill sites is not subject to the front-end controls required of professional engineer/geologist certification or sampling and analysis to ensure that the soil is uncontaminated. *Id.*

### **Unregulated Period**

IEPA raised the issue of the likelihood of groundwater contamination from fill operations prior to the 2006 adoption of Part 1100 rules and during the period of 2006 and the 2010 statutory interim requirements. PC 74 at 8. None of the mandatory screening practices were in place prior to 2006 and only the load checking replacements were in effect between 2006 and mid-2010. IEPA observed that “once contaminated soil has been accepted at fill sites, contamination very likely will migrate to groundwater”. *Id.* This is exacerbated by the large volumes of soil being collected at these sites over many years, infiltration of acidic precipitation, the placement of these materials in the saturated zone, and the complete lack of technological controls such as liners. *Id.* at 8 and 9.

### **Cost of Groundwater Monitoring**

According to IEPA, the cost of groundwater monitoring is reasonable, particularly in comparison to the costs of landfilling the soils, the costs associated with groundwater contamination, and the “present and future costs of the loss of groundwater resources”. PC 74 at 9. IEPA noted further that through tipping fees, fill site owners can reallocate the costs of groundwater monitoring to the source site owners disposing of the soil in the fill sites. IEPA opined that figures have been presented in the record that demonstrate “the increased cost for groundwater monitoring is just a fraction of the current tipping fees per cubic yard”. *Id.*

### **Responses to Specific Questions**

In its comments, IEPA addressed a number of questions raised by participants at hearing, or in pre-filed or oral testimony. The Board will summarize IEPA's responses to those questions directly related to the issue of requiring groundwater monitoring.

**Groundwater.** IEPA was asked whether the modeling performed at the Bluff City fill site that established the three dimensional flow of groundwater near the Bluff Springs Fen was typical of assessments needed to be done at CCDD sites given that the cost was approximately \$364,000. PC 74 at 13. IEPA opined that the cost for the Bluff City fill site is not typical and that the typical assessment would cost less. IEPA explained that the model used for the Bluff City fill site was complex and was needed to establish the direction of groundwater flow and to establish the groundwater monitoring network. In fact, IEPA offered that in the “vast majority of cases for the fill sites under this regulation no modeling will need to be conducted to determine the direction of groundwater flow”. *Id.* IEPA did offer that modeling might be needed in complex vertical and horizontal groundwater flow regimes as in the Bluff City site. *Id.* at 14.

IEPA was asked if the horizontal component of downgradient groundwater quality is determined using a monitoring well that is screened to capture groundwater at different depths, would it be necessary to determine the precise vertical component for the purposes of groundwater monitoring and demonstrating compliance. PC 74 at 14 and 15. IEPA responded by saying, yes, groundwater monitoring wells must be screened at different intervals to monitor the permeable zones encountered. *Id.* at 15. IEPA elaborated by saying the well screen cannot be less than 5 feet or more than 10 feet in length, which results in nested wells. *Id.*

IEPA argued that determining the placement and number of wells needed requires both vertical and horizontal components for the purposes of monitoring and compliance with the Class I groundwater quality standards. PC 74 at 15. IEPA reported that this “can be accomplished using calculations and does not require modeling”. *Id.*

The question was asked of IEPA as to whether background levels should be established for all wells or just the upgradient wells, if groundwater monitoring was required. PC 74 at 12. IEPA stated that it “is only concerned with the establishment of background levels for upgradient wells”. *Id.*

IEPA was asked at the hearing to comment on testimony provided by Mr. Huff that asserted eight monitoring wells would be necessary to characterize downgradient groundwater quality in both vertical and horizontal directions. PC 74 at 16. IEPA previously indicated that only four wells might be required. IEPA was asked under what conditions only four wells might be required. IEPA stated that the conditions under which a site would need only four wells was dependent, at a minimum, on the size of the fill operation, the complexity of the geology/hydrogeology, and the vertical and horizontal extent and concentration of any constituents in the groundwater. IEPA opined that there are many variables to any site that would require a site-specific evaluation, but it contended a “minimum of three wells are needed to establish groundwater flow direction”. *Id.*

**pH Levels.** Several questions were raised with IEPA regarding the pH standard of a maximum of 9.0. PC 74 at 17. The first was whether the rules should address contaminant concentrations for pH greater than 9.0 in that the MACs for only two constituents become more stringent as pH values increase. These are chromium (+6) and selenium. *Id.* Specifically, IEPA was asked if it could “propose MAC values for both chromium (+6) and selenium for pH greater than 9.0 or even just for pH of 12.49”. *Id.* IEPA responded that while it could do this, these values “will lack the scientific veracity we typically employ”. *Id.* at 18. IEPA evaluated establishing a maximum pH of 12.5 using TACO equations, finding that “following the procedures of 35 Ill. Adm. Code 1100.605, the MACs would default to the background concentrations should the Board decide to extend the pH range to a maximum of 12.5”. *Id.*

IEPA was also asked whether the pH range should be limited to 6.25 to 12.5 as suggested by Mr. Huff’s testimony. PC 74 at 18. IEPA recommended that the expansion of the upper pH limit under Part 1100 “to be moderate and not exceed pH 10.0-11.0”. *Id.* at 20. IEPA expressed concerns with a pH of 12.5 because of concerns for soils in the highly caustic range approaching pH 12.5. IEPA has not considered a pH above 9.0 “because that is the upper limit of pH-dependent determinations in TACO. *Id.*

Related to the issue discussed above, IEPA was asked if it had received any information from the fill operators that there were problems with load rejection under the current pH standard of 6.5 to 9.0. PC 74 at 37. IEPA stated that it reviewed the PID rejection forms submitted between September 2012 and June 2013. Of the 378 forms applicable after the pH standard became effective, only three showed a rejection for pH, and these were due to there being no pH test results presented at the fill operation gate by their hauler. IEPA attributed this to the fact that pH screening is occurring earlier in the process, as testified to by Mr. Wilcox. *Id.*

**MACs.** The question was asked of IEPA as to whether the MACs in uncontaminated soils should still be based on the lowest pH dependent value in 742, Appendix B, Table C even if the pH range was limited to between 6.25 and 12.5. PC 74 at 22. IEPA stated yes; however, calculating MACs for soil pH values above 9.0 will require computations that are outside of the TACO regulation. These computations require extensive knowledge of TACO, which is why IEPA argued it preferred that the “Section 1100.605 procedures for determining MACS not be revisited”. *Id.* IEPA was also asked whether the current MAC values are sufficiently protective even if there is an expansion of the upper pH limit. IEPA stated that yes, it believed the “MAC

values will continue to be protective irrespective of a moderate expansion of the upper range of acceptable soil pH”. *Id.*

**PID Responses.** IEPA was asked whether the Board should consider raising the PID response value to 5.0 ppm as suggested by Mr. Huff’s testimony. PC 74 at 27. IEPA responded by reminding that the language of the regulations requires rejection if the PID reading is above “background levels”, although IEPA noted that background is not necessarily zero. IEPA stated that it is not comfortable raising the PID response value to 5.0 ppm “without further scientific evidence of its appropriateness”. *Id.*

**Turbidity.** The question was raised to IEPA as to whether including a provision that would limit samples submitted for total and dissolved metals analysis to 10 nephelometric turbidity units (NTU) would be appropriate in order to avoid the submission of groundwater monitoring samples from wells where an adequate purge had not been achieved and the groundwater had not been stabilized. PC 74 at 29. IEPA stated that it does not recommend adding an NTU factor into collecting groundwater samples for metals because NTUs are more appropriately applied to surface water sources of drinking water. *Id.*

**Codification of MACs.** Mr. Huff raised a question in pre-filed testimony as to whether the Board would “consider codification of the CCDD MAC concentrations”. PC 74 at 41. He also expressed concern about the use of TACO background values for several constituents on the MAC Table. IEPA opposed the recommendation to codify MACs, believing that it has been “completely transparent about the methodology it proposed to establish the MACs”. *Id.* IEPA noted that the methodology in Section 1100.605 “provides a logical and detailed narrative framework to satisfy this mandate”. *Id.* at 42. IEPA argued that there was “no acceptable basis other than TACO” because TACO provides objectives for three receptors and three pathways of exposure. The lowest value of these options was selected to become the contaminant concentration that is protective of public health and safety”. *Id.* IEPA suggested that if a consultant has calculated a different result than what IEPA has published in the MAC Table, IEPA should be contacted so the discrepancy can be worked out. *Id.* at 43.

**Liability.** Mr. Hall and Mr. Quinn testified about “their fears of fill operations being held liable for the groundwater contamination of others if groundwater monitoring is required”. PC 74 at 44. IEPA opined that there was a provision in proposed Section 1100.750 that allows fill site owners to demonstrate that contamination identified in the monitoring is not from their facility. *Id.* IEPA stated that it assumed the concerns related to “contaminated groundwater flowing radially (360°) from various areas into the fill site in response to a cone of depression created from a well or sump dewatering the quarry”. *Id.* at 44 and 45. IEPA explained that “the largest volume of water being pulled into the ZOC [Zone of Capture] is primarily coming from the up-gradient end of the ZOC and not from all directions or 360°”. *Id.* at 46. IEPA concluded by stating “This limits the amount of variability in the background groundwater quality coming into the site.” *Id.*

**Dewatering.** IEPA noted that its proposed groundwater monitoring requirements would not be effective until such time that the owner/operator of the fill site turns off the dewatering pumps. PC 74 at 47. When the monitoring wells are installed, the flow direction will be

determined as well as whether the site is contributing to any groundwater contamination that has been detected in down-gradient monitoring wells. Therefore, IEPA opines, “pre- and post-dewatering background groundwater quality should not be substantially different in the up-gradient monitoring well and down-gradient point of compliance monitoring well(s)”. *Id*

### **Illinois Department of Transportation (PC 75)**

IDOT submitted comments to the Board to clarify some of the statements made by other parties at the May 20, 2013 hearing. PC 75 at 1. IDOT addressed IEPA’s questions regarding the “IDOT exemption” for CCDD from Part 1100. PC 75 at 2. IDOT explained that the exemption is stated in Section 22.51(b)(4)(B) of the Act (415 ILCS 5/22.51(b)(4)(B) (2014)). The statute provides that subsection 22.51(b) does not apply to the use of CCDD as fill material in an excavation other than a current or former quarry or mine if this use complies with the IDOT’s specifications. PC 75 at 2. IDOT noted that Section 22.51(b) of the Act (415 ILCS 5/22.51 (2014)) applies to CCDD only; it does not apply to the management of soil. *Id*.

IDOT opines that there are three types of soils: 1) unregulated soil, 2) uncontaminated soil, and 3) special waste soil. PC 75 at 2. According to IDOT, unregulated soils are soils that are not regulated under Section 3.160 or 3.475 of the Act (415 ILCS 5/.160 and 3.475 (2014)). IDOT continued that uncontaminated soils are those regulated under Part 1100 and can be disposed of at a current or former quarry or mine or other excavation. *Id*. IDOT stated that special waste soils are those that can contain “potential infectious medical waste, hazardous waste, industrial process waste, or pollution control waste.” *Id*.

IDOT explained that it “evaluates all excess soil material that must be managed offsite.” PC 75 at 2. IDOT evaluates all projects that have soil excavations through the IDOT’s Phase I process. *Id*. The Phase I process initially screens the surrounding properties within the construction project to determine if there are any potentially impacted properties (PIP) on or adjacent to the project. *Id*. IDOT explained that “if there is a possibility that a PIP exists within or adjacent to the construction project, then a preliminary environmental site assessment (PESA) is completed. *Id*. at 3.

IDOT explained that if its screening process results conclude that there are no PIPs within the project, or if the PESA report finds properties that are not PIP, “then the soil excavated as part of the construction project is determined to be not regulated.” PC 75 at 3. According to IDOT, these unregulated soils can be “managed without restrictions”. IDOT further explained that if the PESA finds properties that are PIPs, then the IDOT will investigate along the area to be excavated to determine the nature and extent of the potential impacts along the rights-of way. *Id*. Soil analytical results are then compared to Tier I Soil Remediation Objectives for Residential Properties in 35 Ill. Adm. Code 742. IDOT explained that soils that do not exceed the most stringent exposure route values are determined to be unregulated soils, while soils that exceed the most stringent exposure route values are determined to be regulated soils. *Id*.

If excavated soils are associated with soil analytical results that do not exceed the MAC Table in 35 Ill. Adm. Code 1000.Subpart F, they are determined to be “uncontaminated soil.” PC 75 at 3. These soils can be managed without restriction. *Id*. Results that exceed the MAC

Table in 35 Ill. Adm. Code 1000.Subpart F are classified as “special waste.” These soils are often managed as “non-special waste and are disposed of at a properly permitted solid waste landfill.” *Id.*

IDOT explained that it evaluates all excavated soils before a construction project begins. PC 75 at 3. IDOT claims that it has a limited exemption afforded by the Act and 35 Ill. Adm. Code 1100, regarding placing CCDD and soil in a low lying area or in a former IDOT borrow pit. IDOT claims this is warranted because IDOT “makes certain in advance that the CCDD and soil that are placed in these areas are protective of human health and the environment and will not cause or contribute to groundwater contamination.” PC 75 at 3-4.

### **Waste Management of Illinois, Inc. (PC 76)**

Waste Management responded to the Board’s hearing officer order of June 12, 2013. That hearing officer order set forth several questions that had been raised at the May 20, 2013 hearing. The Board summarizes those responses below.

### **LRRA Modeling Costs**

Waste Management clarified that the cost of \$364,000 for modelling by LRRA for the Bluff City facility were not typical for a CCDD as there has been no modeling performed at any CCDD site in the State. PC 76 at 1. Waste Management explained that the modeling performed for the Bluff City Materials facility is unique to that facility and was required by the Illinois Department of Natural Resources (IDNR) to ensure the protection of an adjacent Illinois Nature Preserve, the Bluff Spring Fen, due to the operation of an underground limestone mine. The modeling was meant to evaluate potential impacts to groundwater recharge to the fen from dewatering activities associated with this operation. It was required by a Fen Protection Plan agreed to by Bluff City Materials and the IDNR in 2003, three years before the original CCDD regulations were promulgated in 2006. According to Waste Management, this had nothing to do with the operation or monitoring of a CCDD facility. *Id.*

Waste Management provided two attachments containing the minutes of the 179th and 180th Meetings of the INPC, “in which the threat to the Bluff Spring Fen is discussed along with the Fen Protection Plan, including this modeling.” PC 76 at 1. Waste Management explained that the CCDD groundwater monitoring described in the initial Agency proposal did not require modeling. Rather, the development of a groundwater monitoring program at a CCDD site can be accomplished by performing an “appropriate hydrogeologic site investigation and characterization and groundwater modeling is not a required element.” *Id.*

### **Typical Groundwater Assessment at CCDD facility**

Waste Management explained that there has been no groundwater modeling performed at any CCDD facility in the state, and so therefore there is “nothing typical.” PC 76 at 1. Waste Management pointed out that the Agency proposal for groundwater monitoring contains no requirement to perform groundwater modeling. *Id.*

### **Raising PID Response Value**

Waste Management explained that “relaxation of the PID” would be “misguided”. PC 76 at 1. Although Mr. Huff claimed that relaxing the PID would be appropriate, Waste Management pointed out that the purpose of a groundwater monitoring system is to monitor performance of a facility, not to provide environmental protection. Waste Management claimed that the relaxation of “such an acceptance standard should be accompanied by a commensurate increase in environmental protection, such as the installation of a liner system.” *Id.*

### **Limiting Samples From Monitoring Wells**

Waste Management claimed that it would not be appropriate to limit samples submitted for metals analysis (total and/or dissolved) to 10 NTU or less in order to avoid the submission of groundwater monitoring samples from monitoring wells where an adequate purge has not been achieved and the groundwater has not been stabilized. PC 76 at 2. Waste Management explained that this would be “inconsistent with current groundwater monitoring procedures required for both Illinois non-hazardous (35 Ill. Adm. Code 811) and hazardous (35 Ill. Adm. Code 724) solid waste landfills”, and that “the use of low-flow sampling procedures is routinely used at these types of facilities, including groundwater monitoring wells screened within fine-grained materials, without the need for a 10 NTU standard”. *Id.*

### **The Office of the Attorney General (PC 77)**

The People argued that protecting citizen’s rights to a healthy environment is an obligation of the Attorney General under the Illinois Constitution. PC 77 at 1, citing Ill. Const. 1970, art. XI §2; People v. NL Industries, 152 Ill.2d 82, 102 (1992). The People maintained that the obligation includes ensuring that CCDD is disposed properly and that groundwater is protected. *Id.*, citing 415 ILCS 5/21, 22.51, and 12(a), (d) (2014). The People concurred with IEPA’s post-hearing comments (PC 74) and reiterated the importance of protecting the State’s groundwater in this proceeding. *Id.* at 1-2.

### **Law Requires Protection of Groundwater**

The People have advocated throughout this proceeding for the inclusion of groundwater monitoring in Part 1100. PC 77 at 2. The People noted that this rulemaking is required by Section 22.51 of the Act and Section 22.51(f)(1) of the Act (415 ILCS 5/22.51(f)(1) (2014)) contains requirements for Part 1100 rulemaking. *Id.* The People noted that Section 22.51(f)(1) of the Act (415 ILCS 5/22.51(f)(1) (2014)) specifically requires the rules to “include standards and procedures necessary to protect groundwater”. *Id.* at 3.

The People reiterated its opinion that the Illinois Constitution, the Act and the Groundwater Protection Act, establish a framework for protection of groundwater in the State. PC 77 at 3-5, *see also* Exh 59. The People note that the statutory framework includes direction to “restore, maintain and enhance the purity of the waters” of Illinois. PC 77 at 4, quoting 415 ILCS 5/11(b) (2014). Further, the Groundwater Protection Act includes findings by the General Assembly that contamination of groundwater will have an adverse impact on the health and

welfare of the citizens of the State and groundwater protection is necessary for the economic development of the State. *Id.*, quoting 415 ILCS 55/2 (2014). Finally, the People noted that Section 12 of the Act prohibits pollution of the waters of the State and even the creation of a potential water pollution hazard. *Id.*, quoting 415 ILCS 5/12(a) and (d) (2014).

The People maintained that the General Assembly's enactment of these provisions "lead to the conclusion that the use of CCDD as fill may, at a minimum, create a water pollution hazard." PC 77 at 5. The People further maintained that the "plain language" of Section 22.51 of the Act (415 ILCS 5/22.51 (2014)) demonstrates that the General Assembly determined that CCDD fill operations threaten groundwater. *Id.*

The People claimed that the Board has to this point relied on adoption of certification requirements (*i.e.* the MACs of contaminants) to ensure the protection of groundwater. PC 77 at 6. However, the People argued that certification requirements cannot be solely relied on to protect groundwater, where the record in this case demonstrates:

- 1) disposal of fill without any regulatory safeguards from 1997 to 2005,
- 2) screening of incoming loads with a photo ionization detector ("PID") limited to detecting only the presence of volatile organic chemicals ("VOCs") from 2005 to 2010,
- 3) numerous fill operator's failing to comply with the Part 1100 regulations; and
- 4) the presence of soils at fill operations that exceed the MACs. Given the Act's mandate that it be "liberally construed" to effectuate its purposes, coupled with the General Assembly's mandate to protect, enhance and restore the State's groundwater, the Board should require groundwater monitoring and corrective action at fill operations. *Id.*

### **Information in the Record Warrants Groundwater Monitoring**

The People reiterated that the need for groundwater monitoring is evident given the regulatory history of CCDD facilities from 1997 to 2010. PC 77 at 6, *see also* Exh. 59. The People opined that the lack of procedures for identification of contaminated materials at fill operations from 1997 to 2010 "highlights the need for groundwater monitoring to detect" contamination from fill that did not receive the level of "pre-disposal scrutiny currently required". *Id.*

The People offered that there is ample evidence in the record of contamination at fill sites, noting testimony regarding samples from CCDD sites that included detections of PNAs above the MACs. PC 77 at 6, citing Exh. 12 at 3-5. The People also pointed to IEPA's soil samples for twelve fill operations where surface samples from the active fill face were taken and analyzed for metals, semi-volatile organic compounds, and pH. PC 77 at 6-7, citing Exh. 63 at 9-10. The People noted that IEPA identified exceedances of the MACs and/or pH limits at ten of

the 12 facilities. *Id.* The People also reiterated that since the latest amendments to Part 1100 there have been 13 enforcement actions for violations at CCDD facilities.

The People believe that a more comprehensive approach to groundwater protection is necessary and that groundwater monitoring should be included in Part 1100. PC 77 at 7. This approach is particularly necessary for people who rely on groundwater for drinking water and absent monitoring contamination may not be discovered until drinking water has been impacted. *Id.* Thus, the People argued that the Board should include groundwater monitoring in Part 1100. *Id.*

### **Effects of Reclaimed Asphalt on the Environment**

In previous comments, the People indicated concern for contaminants from reclaimed asphalt pavement, which contains PNAs. *See* Exh. 54 at 7. The People noted testimony from the May 20, 2013 hearing, that asphalt is “inert” and “nonleachable” and that it is “commonly known that asphalt cement is inert and not a threat to the groundwater.” Tr. at 99-100; Exh. 60 and 61. The People claimed that a review of State laws, guidance documents and scientific literature indicates that there is firm support for the contention that asphalt is not necessarily “inert” and poses a threat to groundwater. PC 77 at 7-8.

The People noted that the definition of “inert waste” in the Board’s rules does not include “reclaimed or other asphalt pavement,” like the definition for CCDD. PC 77 at 8, citing 415 ILCS 5/3 .160(b) (2014). Inert Waste:

means any solid waste that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a contaminated leachate, as determined in accordance with 35 Ill. Adm. Code 811.202(b). Such inert wastes will include only non-biodegradable and non-putrescible solid wastes. Inert wastes may include, but are not limited to, bricks, masonry, and concrete (cured for 60 days or more). 35 Ill. Adm. Code 810.103.

Further, the People noted that Section 22.51(f)(1) of the Act (415 ILCS 5/22.51(f)(1) (2014)) also indicated that the CCDD regulations could limit the amount of asphalt used as fill. PC 77 at 8. Section 22.51(f)(1) provides in part:

The rules may also include limits on the use of recyclable concrete and asphalt as fill material at clean construction or demolition debris fill operations, taking into account factors such as technical feasibility, economic reasonableness, and the availability of markets for such materials. 415 ILCS 5/22.51(f)(1) (2014)

The People then provided a review of other jurisdictions and reclaimed asphalt. PC 77 at 9-12.

The People expressed concerns with other contaminants that also could be in reclaimed asphalt. PC 77 at 12. The People noted asphalt can include vehicle debris, and, road salts, and can be contaminated by sealcoating. *Id.*

The People argued that if asphalt were considered inert waste then the Board should look to the inert waste regulations at 35 Ill. Adm. Code 811. PC 77 at 14. The People noted that inert waste landfills are required to collect and analyze leachate and to notify IEPA of any contamination. *Id.*

### **Illinois Nature Preserve Commission (PC 78)**

INPC responded to questions submitted by the Board on April 18, 2013 (Exh. 52). The Board sought information from INPC about the location of CCDD or uncontaminated soil fill sites within Class III groundwater contribution areas. Exh. 52. INPC provided maps and information of either a CCDD or uncontaminated soil fill located within Class III groundwater areas in three parts of the State. Those are the Sand Ridge Nature Preserve (Cook County), Searls Park Prairie Nature Preserve (Winnebago County), and Yonder Prairie Nature Preserve (McHenry County). PC 78 at Exhibits 1, 2, and 3. INPC agrees that a setback zone could help to protect these areas and INPC asked that Board to consider hydrologic vulnerability of and hydraulic connectivity to Nature Preserves when determining whether or not to require groundwater monitoring. PC 78 at 2.

### **DISCUSSION**

At the request of JCAR, the Board opened this subdocket to allow an opportunity for participants and other interested persons to provide comment and testimony on the Board's decision not to require groundwater monitoring as a part of the CCDD and uncontaminated soil fill regulations in Part 1100. The Board received an additional 30 comments in this subdocket, some expanding on prior comments, while others offered new perspectives on the issue. In addition, the Board held another day of hearing devoted to the issue of groundwater monitoring. The issue remains whether or not the record supports requiring groundwater monitoring for CCDD and uncontaminated soil fill operations regulated under Part 1100. After reviewing the entire record and considering the additional comments and testimony, the Board remains unconvinced that groundwater monitoring for permitted CCDD and uncontaminated soil fills sites is required for the protection of groundwater. In fact, the Board finds additional evidence provided in this subdocket to support the Board's finding. The following discussion explains the Board's reasons why it remains unconvinced that groundwater monitoring is necessary to protect groundwater.

### **CCDD Regulated Under Part 1100 and "Waste"**

The Board notes that the record indicates some confusion may still exist with regard to CCDD and uncontaminated soil that is placed in permitted facilities regulated under Part 1100 and materials that are considered "waste". The Board notes that several commenters referred to CCDD and uncontaminated soil as "waste" in their comments. The Board disagrees with this reference and reiterates its finding:

that CCDD and uncontaminated soil meeting the requirements of this rule are not a waste. Section 3.160(b) of the Act specifically provides for CCDD and uncontaminated soil, used "as fill material in a current or former quarry, mine, or

other excavation, is used in accordance with the requirements of Section 22.51 of this Act” are not waste. The Board will therefore not treat them as waste.  
Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 86 (June 7, 2012.)

This distinction was made by the General Assembly in deciding to allow CCDD and uncontaminated soil facilities to operate under the statute and the Board rules implementing the statute. Therefore, the Board cannot treat CCDD and uncontaminated soil, regulated under Part 1100, as waste.

In addition to this confusion in the record, the People reiterate arguments that CCDD and uncontaminated soil fill operations regulated under Part 1100 will include materials that have characteristics similar to waste disposed of in inert landfills regulated under 35 Ill. Adm. Code 810. The Board remains unconvinced that CCDD and uncontaminated soil regulated under Part 1100 should be regulated as if the materials are inert waste. As stated above CCDD and uncontaminated soil regulated under Part 1100 are not waste, and the General Assembly made that clear. Section 22.51(d) of the Act specifically states: “[t]his Section applies only to clean construction or demolition debris that is not considered “waste” as provided in Section 3.160 of this Act.” 415 ILCS 5/22.51(d) 2014. Thus, the General Assembly did not intend CCDD that is regulated under Section 22.51 to be treated as waste, even inert waste.

### **Exempt Sites**

One area that received additional attention as a part of this subdocket is the number of sites exempt from Sections 22.51 and 22.51a of the Act (415 ILCS 5/22.51 and 22.51a (2014)), and as a result from Part 1100. Those exemptions are codified in Sections 1100.101(b)(2) and (3). Of particular interest are sites that use CCDD or uncontaminated soil as fill other than at former quarries or mines that comply with IDOT specifications. At hearing, these sites were referred to as “borrow pits”. There are numerous borrow pits developed every year in Illinois as part of state, county, or municipal road construction projects. IDOT provided guidance on how it determines that the CCDD or uncontaminated soil is “clean”. A review of those procedures demonstrates that they are similar to the procedures codified in Part 1100 for permitted facilities, although groundwater monitoring is not required. These exempt sites however are not subject to Part 1100, and would therefore be exempt from any groundwater monitoring requirements, if the Board adopted such requirements. The Board believes that the existence of these borrow pits that are statutorily exempted from Part 1100, further supports the Board’s reading of the statute that groundwater monitoring is not required. Further, the borrow pits use similar methods for determining what material can be placed in the borrow pits as those methods used by permitted CCDD and uncontaminated soil fill sites, and those are the only steps borrow pits use to protect groundwater. Therefore, the Board is convinced that permitted CCDD and uncontaminated soil fill sites that have even more stringent requirements, need not perform groundwater monitoring to protect groundwater.

### **Procedures in Part 1100 Are Sufficient**

IEPA continues to argue that groundwater monitoring is the best avenue to protect against potential contamination from CCDD and uncontaminated soil fill sites. The People, CARE, and Will County among others support this position, arguing that there could be some failure of the front-end screening that would result in contamination. Further, many who support groundwater monitoring would have the front-end screening requirements remain in place. The Board stated at second notice:

The Board's rules, building on the IEPA's proposal, require that a site owner must certify that the soil is not from a PIP in order to avoid testing soils for constituents other than pH. Further, the Board offers guidance in the rules on what a site owner/operator must examine in order to determine if the site is a PIP. Thus, procedures are required that will limit the use of uncontaminated soil that has not been tested to sites that are unlikely to have been impacted by contaminants.

If a source site is a PIP, then testing must be done and soils cannot exceed the MACs. If soils exceed the MACs the soil is not "uncontaminated" and cannot be used as fill in a CCDD or uncontaminated soil fill operation. Thus, the Board's rules prohibit using soils that are contaminated as fill material in a CCDD or uncontaminated soil fill operation. As the rules do not allow for contaminated material to be placed in a fill operation, the Board is unconvinced that groundwater monitoring is required.

The Board understands that mistakes can be made and that there are persons who may choose to ignore the law. However, the rules do provide checks at the fill sites to alleviate the potential for source site owners/operators to make mistakes. Furthermore, LPE/LPGs [licensed professional engineer/licensed professional geologist] will be certifying that soils meet MACs from PIPs and errors by LPE/LPGs have ramifications for them professionally. Thus, the Board is convinced that the rules provide checks and balances against errors and persons who may choose to ignore the law. Proposed Amendments to Clean Construction or Demolition Debris Fill Operations (CCDD): Proposed Amendments to 35 Ill. Adm. Code 1100, R12-9, slip op. at 8.-876 (June 7, 2012.)

The Board is unconvinced by the additional arguments made in this subdocket that the safeguards adopted to protect groundwater will fail. While evidence of enforcement actions and evidence regarding sites not regulated under Part 1100 were offered, the record still does not provide indications of groundwater contamination at sites that are permitted under Part 1100. Also, while the Lynwood site showed contamination, Reliable Lyons does not show contamination in its dewatering.

The Board is also puzzled by information that facilities that dewater and, therefore, have an NPDES permit, are not required to perform groundwater monitoring and would only do so when dewatering ended. This could mean that groundwater monitoring will not even begin at some Part 1100 sites for years. This is especially puzzling as the IEPA argued that it would not "equate" dewatering data to data from groundwater monitoring. It would seem that the analysis

of water being removed from the facilities would offer some insight into what contaminants might enter the groundwater.

Adding this information to the fact discussed above that many borrow pits exist annually in Illinois, which use similar methods to certify the material as clean, the Board finds that the safeguards adopted in Part 1100 are sufficient to protect groundwater.

### **Legal Background**

Participants provided no new arguments regarding the Board's authority; however, IEPA did argue that the Board's approach in this rulemaking is contrary to the approach taken in R89-5. The Board finds that this rulemaking is quite different from R89-5. First, the Board notes that in R89-5 the Board adopted rules because:

Sections 14.4(b) and 14.4(d) mandate *inter alia* that the [IEPA] propose and the Board promulgate regulations prescribing standards and requirements for certain activities within setback zones and regulated recharge areas, as those terms are defined in the [Groundwater Protection Act]. The set of affected activities included, in general, those activities that offer significant potential for producing groundwater contamination, and which are not otherwise currently subject to regulations which limit or eliminate their potential for producing groundwater contamination. Groundwater Protection: Regulations of Existing and New Activities Within Setback Zones and Regulated Recharge Areas; Groundwater Technical Standards: 35 Ill. Adm. Code 601, 615, 616, and 617, R89-5, slip op. at 1 (Dec. 6, 1991).

The Groundwater Protection Act defined the activities to be examined in R89-5.

In this rulemaking, the Board already adopted safeguards for groundwater. Further the General Assembly did not include facilities permitted under Part 1100 as one of the activities to be given special consideration by the Groundwater Protection Act. Further, in R89-5, the Board was adopting rules to protect sensitive areas for groundwater and establishing setback zones; while under Part 1100, new wells are not allowed within a specific setback zone and thus Part 1100 already established setback zones for permitted CCDD and uncontaminated soil fill sites. For all of these reasons, the Board finds that its ruling in R89-5 is consistent with the Board's decision not to require groundwater monitoring in Part 1100.

### **Issues Unrelated to Groundwater**

The Board appreciates the concerns raised, in particular by Mr. Huff, regarding pH, establishing a PID threshold, and codification of MACs. However because the Board is not proceeding with a rule at this time, the Board will not review the changes requested in this docket. If these concerns remain, participants are encouraged to propose a new rulemaking.

### **CONCLUSION**

After reviewing the entire record and considering the additional comments and testimony, the Board remains unconvinced that groundwater monitoring for permitted CCDD and uncontaminated soil fills sites is required for the protection of groundwater. Therefore, the Board closes this docket.

**ORDER**

The Board closes this subdocket.

IT IS SO ORDERED.

Board Member J. A. Burke abstains.

Board Member C.K. Zalewski abstains.

I, John T. Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on August 6, 2015, by a vote of 3-0.



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John T. Therriault, Clerk  
Illinois Pollution Control Board