

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
)  
PROPOSED AMENDMENTS TO )  
CLEAN CONSTRUCTION OR DEMOLITION ) R2012-09  
DEBRIS FILL OPERATIONS (CCDD): ) (Rulemaking – Land)  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code 1100) )

NOTICE OF FILING

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Attached Service List

PLEASE TAKE NOTICE that I have today efiled with the Office of the Clerk of the Illinois Pollution Control Board the Association of Environmental and Engineering Geologists' Prefiled Testimony of Duane Kreuger and William Dixon, copies of which are herewith served upon you. I have also filed Comments from Jennifer Bauer, President of the Association of Environmental and Engineering Geologists, and from myself, Kevin Richards, Chairman of the North Central Section of the Association of Environmental and Engineering Geologists. Ms. Bauer and I will not be able to attend the hearing, so we are only filing comments and will not be available for questions at the hearing. Mr. Kreuger and Mr. Dixon will attend the hearing and will be available to answer questions regarding their testimony.

NORTH CENTRAL SECTION, ASSOCIATION OF ENVIRONMENTAL AND ENGINEERING GEOLOGISTS

By:   
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## **EXHIBIT LIST**

|                                  |   |                     |
|----------------------------------|---|---------------------|
| IN THE MATTER OF:                | ) |                     |
|                                  | ) |                     |
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| CLEAN CONSTRUCTION OR DEMOLITION | ) | R2012-09            |
| DEBRIS FILL OPERATIONS (CCDD):   | ) | (Rulemaking – Land) |
| PROPOSED AMENDMENTS TO 35 III.   | ) |                     |
| Adm. Code 1100)                  | ) |                     |

Exhibit 1      Prefiled testimony of Duane Kreuger

Exhibit 2      Prefiled testimony of William Dixon

Exhibit 3      Comments of Jennifer Bauer

Exhibit 4      Comments of Kevin Richards

ILLINOIS POLLUTION CONTROL BOARD

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PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code 1100) )

PRE-FILED TESTIMONY OF DUANE T. KREUGER ON ILLINOIS EPA'S PROPOSED AMENDMENTS TO PART 1100

Qualifications

My name is Duane T. Kreuger. I am the Environmental Group Manager with Geotechnology, Inc and am a Past President of the Association of Environmental and Engineering Geologists (AEG). Geotechnology, Inc. is a 150 member professional engineering and environmental consulting firm with offices in St. Louis, MO, Collinsville, IL, Overland Park, KS and Memphis, TN. The AEG is a professional society with approximately 3,000 members including geological engineers, engineering geologists, geologists, and hydrogeologists.

I graduated from the University of Illinois-Urbana in 1992 with a B.S. in Geology. I am a Registered Geologist in Missouri and a Professional Geologist in Illinois. A copy of my resume is included as Attachment 1.

Testimony

Today I am testifying in support of the proposed amendments to the existing 35 Ill. Adm. Code Part 1100 and request that the Illinois Pollution Control Board consider an additional amendment to Section 1100.710 – Professional Engineer Supervision – to allow Licensed Professional Geologists (PGs) to have similar supervisory authority regarding the design of groundwater monitoring systems and groundwater monitoring programs (1100.725 and 1100.730) as that afforded to Professional Engineers (PE).

Licensed geologists, through their education, training and experience are uniquely qualified to evaluate and interpret three-dimensional subsurface conditions, including the distribution and characteristics of soil and rock materials and formations, and the presence, location, distribution and movement of water and other fluids within these materials. Educational coursework including stratigraphy, structural geology, geomorphology, hydrogeology, and soils provide geologists the tools and understanding to design groundwater monitoring systems. The proposed rules allow for placing CCDD in quarries, pits, etc., where the fill may be in direct contact with open fractures in the soil or bedrock. Professional geologists possess abilities to interpret these on-site geologic conditions, and can determine the

differences between perched groundwater and an aquifer and any potential pathways for contaminant migration. Thus, professional geologists are equally qualified to design and supervise groundwater monitoring systems and programs.

In order to be licensed as a Professional Geologist in Illinois, candidates must pass two examinations, the Fundamentals of Geology and Practice of Geology examinations developed by the National Association of State Boards of Geology (ASBOG). Approximately one-fifth of the practice examination specifically addresses issues related to the practice of hydrogeology. Geologists licensed in Illinois are fully qualified to design groundwater monitoring systems and programs.

## Duane T. Kreuger, R.G., P.G.

### Environmental Group Manager

**Experience:** 19 years  
**Education:** B.S., Geology, University of Illinois-Urbana  
**Registration:** Registered Geologist – Missouri  
Professional Geologist – Illinois  
Environmental Professional (per ASTM 1527-05 and AAI criteria)

Mr. Kreuger is Geotechnology's Environmental Group Manager. He has performed hundreds of Phase I ESA's for Local, State, and Federal sites, gasoline stations, hotel developments, libraries, historic facilities, educational campuses, multifamily developments, HUD properties, and brownfield sites. His experience includes a planned development of a 640-acre tract in Collinsville, Illinois; redevelopment of the historic Warren Funeral Home in Columbia, Missouri; industrial development of a 320-acre tract in Hazelwood, Missouri; and Missouri State emissions testing stations in St. Louis County.

Mr. Kreuger has served as environmental consultant on dozens of asbestos and lead abatement projects related to renovations of building and HVAC systems, demolition of structures, and property transfers for both public and private sectors. His experience also includes air sampling and contractor observation. Among his project experience is the oversight of environmental demolition activities on the Lambert-St. Louis Airport Expansion Project and at the Civil Courts renovation project for the City of St. Louis. Tasks for these included lead and asbestos inspections, third party air monitoring, characterization of hazardous waste streams, and PCB removal in the historic, 300,000 square foot court building. He has also overseen the campus-wide asbestos surveys and Operations & Maintenance plans for Webster University.

Mr. Kreuger has served as field geologist on hundreds of subsurface exploration/groundwater monitoring projects including Superfund sites, solid waste landfills, levee/dewatering projects, bridge design, and private developments.

Mr. Kreuger has served as Project Manager for the Lambert - St. Louis International Airport Expansion project which included \$4.5 Million of asbestos inspections and monitoring, Phase I/II ESAs, groundwater monitoring and risk assessments.

Mr. Kreuger served as program manager for over 60 underground storage tank sites for a large oil company client in Missouri and Illinois. He was responsible for writing work plans/cost estimates, directing field activities (including subsurface investigations, groundwater monitoring events, remedial application techniques and response activities) and submitting reimbursement information to the storage tank insurance funds.

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PRE-FILED TESTIMONY OF WILLIAM G. DIXON, JR. ON ILLINOIS EPA'S PROPOSED AMENDMENTS TO PART 1100

To the Illinois Pollution Control Board, October 25, 2011, Chicago, Illinois

Mr. Chairman, Members of the Board:

My name is William G. Dixon, Jr. I live in Naperville, Illinois, am retired from the Illinois State Geological Survey, am currently employed part-time by Practical Environmental Consultants, Inc., Schaumburg, Illinois as a Senior Environmental Geologist, am a former chair of The Illinois Board of Licensing for Professional Geologists, am Illinois License Professional Geologist No. 2, and am a Past President of the National Association of State Boards of Geology (ASBOG<sup>®</sup>) that prepares the examinations used by Illinois for licensure of geologists. I am speaking on behalf of the North Central Section of the Association of Environmental and Engineering Geologists (AEG-NC) of which I have been a Member since May of 1972 and was Section Chairperson in 1981 and 1982.

Several sentences of the CCDD Act were amended to include Licensed Professional Geologists in addition to Licensed Professional Engineers as qualified individuals to plan and direct work on certain aspects at CCDD sites, and to sign reports certifying conditions at CCDD sites. The regulations now under consideration do not include Licensed Professional Geologists in the wording, and I feel that the regulations should be amended to parallel the wording in the Act for the following reasons:

1. Many geologists are trained to sample, analyze, and describe earth materials, and some have gone on to specialize in the petrographic analysis of concrete.
2. Many geologists are trained to characterize the geologic conditions at various sites. The uppermost bedrock in Illinois is mostly of sedimentary origin, but at some places in southern Illinois, the sedimentary strata are cut by igneous dikes. Most of the state is covered by glacial material deposited by one or more invading ice sheets. Geologists are best trained to describe and explain the stratigraphic distribution and physical, structural conditions of the various types of geologic materials surrounding CCDD sites.
3. Many geologists are trained to determine hydrogeologic conditions at sites by planning monitoring well programs and selecting appropriate locations from which groundwater samples can be obtained for analysis and interpretation.



4. Many geologists are trained to determine environmental quality at sites by observing existing conditions and sampling and testing for impacts to the natural environment.

It would be greatly appreciated by me and a number of other Licensed Professional Geologists, practicing within their areas of expertise, in Illinois, if the Board would amend the regulations to parallel the wording in the Act.

I would be pleased to answer any questions that you may have.



**ASSOCIATION OF ENVIRONMENTAL &  
ENGINEERING GEOLOGISTS**

P.O. Box 460518  
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Illinois Pollution Control Board  
1021 North Grand Avenue East  
P.O. Box 19274  
Springfield, Illinois 62794-9274

October 5, 2011

Re: Case No. R2012-009 – Proposed Amendments to Clean Construction or Demolition Debris (CCDD) Fill Operations: Proposed Amendments to 35 Ill. Adm. Code 1100

Dear Sirs/Madams;

I am writing to you on behalf of the Association of Environmental & Engineering Geologists (AEG). The Association represents over 3000 environmental and engineering geologists throughout the United States. The AEG recognizes the value added by environmental and engineering geologists in a range of projects that require interpretation of complex geologic and environmental issues. It is our policy to promote environmental and engineering geology for situations that require specialized training and expertise in geology.

This letter serves as my written testimony in the referenced case. The Illinois CCDD rules as currently written fail to recognize the need for a professional geologist in the monitoring of CCDD materials. In particular, our concern is that disposal of these materials in quarries and mines that were excavated in rock will require someone with an appropriate background in geology to assess a proper monitoring plan. Since these materials will be disposed of in mined rock, the hydrogeology will be complicated by the presence of fractures and the primary porosity of the rock. It is the AEG's position that disposal of materials in mined rock openings requires assessment by practitioners properly trained in geology. At a minimum, this would require relevant experience with developing deep aquifer monitoring plans and completion of a geology degree that includes coursework in Structural Geology, Hydrogeology, Igneous and Metamorphic Petrology, and Stratigraphy. Most professional engineers would not meet this minimum requirement; hence, we encourage you to review the monitoring requirements in the code.

Thank you for providing us an opportunity to provide written testimony in your rulemaking hearings.

Sincerely,

Jennifer B. Bauer, L.G.  
2011-2012 President, Association of Environmental & Engineering Geologists

[AEG 55th Annual Meeting at the Hilton in Salt Lake City, Utah, September 15-23, 2012](#)



*Electronic Filing - Received, Clerk's Office, 10/07/2011*  
*Association of Environmental and Engineering Geologists, North Central Section*

*c/o Kevin S. Richards, 2011 AEG-NC Chair*  
*1530 Willow St.*  
*Lake Forest, IL 60045*

October 7, 2011

Illinois Pollution Control Board  
1021 North Grand Avenue East  
PO Box 19274  
Springfield, Illinois 62794-9274

Re: Proposed Amendments to Clean Construction or Demolition Fill Operations (35 ILL. ADM. Code 1100) R2012-09 (Rulemaking-Land)

Dear Board Members,

I represent the Association of Environmental and Engineering Geologists, North Central Section as current Chair of the Section. The Section has about 200 current members and represents the northern half of Illinois, all of Wisconsin, Michigan, Minnesota and portions of Iowa, Indiana and Ohio. I am both a licensed Professional Engineer and Professional Geologist in the State of Illinois and have been practicing here since 1990. My background with the U.S. Army Corps of Engineers provided me a unique frame of reference for the proposed regulations to use CCDD in quarries and mines. I worked for the U.S. Army Corps of Engineers from 1990 through 1998 and was hired to develop a geologic/hydrogeologic site characterization plan for the proposed Cup McCook Reservoir, a combined sewer overflow reservoir to be constructed in the McCook Quarry. In this capacity, I developed an overall site characterization plan, prepared the scopes of work for the geologic/geotechnical investigations, evaluated the subsequent data obtained from these studies to develop the geologic and hydrogeologic framework for the area, performed groundwater modeling studies, and developed preliminary plans for the protection of groundwater resources around this large quarry.

I am concerned with Subpart G of the proposed rules. In particular, if a monitoring plan is to be developed for clean fill operations in mined rock excavations, a Licensed Professional Geologist should be involved with certifying that the monitoring plan is suitable. Only a Licensed Professional Geologist has the proper State certification to be making these types of determinations, as bedrock hydrogeology requires knowledge in a number of specialized fields that only someone with a degree in geology would acquire.

I concur with the IEPA opinion that short term monitoring be done at CCDD facilities, even though "certified" clean fill will be used in these facilities. A short, post-closure monitoring program will both protect the public and the operators of these facilities. Because the fill material has been certified as clean, the cost of these monitoring programs should be kept low. A Licensed Professional Geologist is best equipped to aid in the development of a low cost, but effective, monitoring plan at these types of facilities.

Sincerely,

A handwritten signature in black ink that reads "Kevin S. Richards". The signature is written in a cursive style with a large, prominent "K" and "R".

Kevin S. Richards, Ph.D., P.E., L.P.G.  
2011 Chair - AEG North Central Section