

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO)
CLEAN CONSTRUCTION OR DEMOLITION DEBRIS)
FILL OPERATIONS (35 IAC PART 1100))

R2012-009 (B)
(Rulemaking-Land)

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Pollution Control Board

NOTICE OF FILING

 ORIGINAL

To: See Attached Service List

Please take notice that I have filed today with the Illinois Pollution Control Board my testimony for the May 20, 2013 hearing.

Dated: May 13, 2013

Respectfully submitted,

American Institute of Professional Geologists, Illinois-Indiana Section

By: *Martin J. Hamper*
Martin J. Hamper, PG, CPG
Board Member

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PRE-FILED TESTIMONY OF MARTIN J. HAMPER, PG

The American Institute of Professional Geologists (AIPG) was founded in 1963 and is the largest association dedicated to promoting geology as a profession. We have approximately 6,000 members in the United States and abroad, organized into 36 regional Sections. On behalf of the Illinois-Indiana Section of the AIPG (i.e., Section), I am providing testimony in support of including Illinois Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed 35 Illinois Administrative Code (IAC) Section 1100.710. I am an Illinois Professional Geologist currently serving as a Board Member of the Illinois-Indiana Section, and have previously served as President of the Section. A brief summary of my professional background and publications/presentations is attached.

Professional Geologists in Illinois and across North America have been directly involved in the routine design, planning, execution and management of groundwater monitoring programs for several decades. Based on the educational curriculum, industry standard work experience and licensing requirements, Professional Geologists are qualified to perform the duties required under the Rule. As such, the AIPG requests that the proposed Section 1100.710 be revised to include Illinois Licensed Professional Geologists in the execution of the Rule with respect to groundwater monitoring programs related to CCDD operations.

As explained below, the Illinois Legislature has included groundwater monitoring in the practice of Professional Geology, and the licensure process in Illinois assures that Professional Geologists have the requisite course curriculum, college degree, training, and work experience to implement groundwater monitoring programs. Furthermore, Illinois Professional Geologists already provide similar services under the Illinois Site Remediation Program and the Illinois Leaking Underground Storage Tank Program. A brief summary of reasons for including Illinois Professional Geologists in 35 IAC 1100.710 is provided below.

**Reason No. 1 for Proposed Rule Revision Request
The Professional Geologist Licensing Act**

The Professional Geologist Licensing Act [225 ILCS 745] (Public Act 89-366 eff. 7-1-1996) 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. Accordingly, the proposed rule

should be revised to include Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.

Section 15 of the Act provides the following examples:

“Examples of the practice of professional geology include, but are not limited to, the conduct of, or responsible charge for, the following types of activities: (i) mapping, sampling, and analysis of earth materials, interpretation of data, and the preparation of oral or written testimony regarding the probable geological causes of events; (ii) planning, review, and supervision of data gathering activities, interpretation of geological data gathered by direct and indirect means, preparation and interpretation of geological maps, cross-sections, interpretive maps and reports for the purpose of determining regional or site specific geological conditions; (iii) the planning, review, and supervision of data gathering activities and interpretation of data on regional or site specific geological characteristics affecting groundwater; (iv) the interpretation of geological conditions on the surface of the Earth and at depth in the Earth for the purpose of determining whether those conditions correspond to a geologic map of the site or a legally specified geological requirement for the site; and (v) the conducting of environmental property audits.”

Licensed Professional Geologists have demonstrated the capability of practicing the science of geology, which as recognized in the Act, is a science that includes all surface and underground waters, gases and other materials that compose the earth as they may relate to geologic processes. Furthermore, geology includes the utilization of this knowledge of the earth and its solids, fluids, and gases, and their collective properties and processes, for the benefit of humankind; and in many instances, those Licensed Professional Geologists are employed to address soil and groundwater issues.

**Reason No. 2 for Proposed Rule Revision Request
Educational Curriculum of Professional Geologists**

Professional Geologists are required to demonstrate they have fulfilled the required educational curriculum and have earned a professional degree that meets the standards that qualifies them to practice professional geology in Illinois. The required educational curriculum includes a variety of courses including courses such as groundwater field methods, hydrogeology and aqueous geochemistry. The educational curriculum prepares Professional Geologists for the practice of Professional Geology, which includes groundwater monitoring. Accordingly, the proposed rule should be revised to include Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.

**Reason No. 3 for Proposed Rule Revision Request
National Association of State Boards of Geology ASBOG® Examination**

The Illinois program for the licensure of Professional Geologists has a testing component that includes groundwater related aspects as described below. The testing component prepares Professional Geologists for the practice of professional geology, which includes groundwater

monitoring. Accordingly, the proposed rule should be revised to include Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.

A candidate for licensure as a Professional Geologist in Illinois must pass the technical examination administered by the National Association of State Boards of Geology (ASBOG®). The ASBOG® examination includes testing of the candidate's knowledge of hydrogeology and groundwater monitoring. Specifically, the following items are part of the examination as outlined in the ASBOG Professional Geologists Candidate Handbook¹:

- Well drilling, design, and construction;
- Site investigation methods, tools and applications;
- Low temperature aqueous geochemistry;
- Groundwater and surface water;
- Contaminant transport and geochemistry;
- Hydraulic properties of fluids and earth materials;
- Soil and water remediation techniques;
- Professionalism and ethics
- Water resource protection; and
- Project management, organization and economics.

As outlined in the ASBOG Professional Geologists Candidate Handbook, among other things, the examination tests the candidate's ability to:

1. Plan and conduct hydrogeological, geochemical and environmental investigations, including the use of modeling, geophysics and isotopic and tracer studies;
2. Define and characterize hydraulic properties of saturated and vadose zone flow systems;
3. Design groundwater monitoring, observation, extraction, production, or injection wells;
4. Evaluate water resources, assess aquifer yield, and determine sustainability,
5. Characterize water quality and assess aquifer chemical fate and transport; and
6. Manage, develop, protect, or remediate surface water or groundwater resources.

**Reason No. 4 for Proposed Rule Revision Request
Site Investigations under the Remediation Program**

The Illinois Legislature recognized through Title XVII of the Environmental Protection Act (415 ILCS 5/58.7 (f); 58.6) that Illinois Professional Geologists have the education, training, experience and licensure to conduct and certify soil and groundwater investigations. The

¹ <http://www.asbog.org/Documents/2012%20Professional%20Geologist%20Candidate%20Handbook3.pdf>

Environmental Protection Act provides that Illinois Professional Geologists may certify and submit plans, conduct site investigations and prepare and certify site investigation reports under the Site Remediation program. The design, implementation and reporting of groundwater monitoring programs are routine aspects of site investigations performed by Illinois Professional Geologists. Accordingly, the proposed rule should be revised to include Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.

Reason No. 5 for Proposed Rule Revision Request

Site Investigations under the Leaking Underground Storage Tank Program

The Illinois Legislature recognized through Title XVI of the Environmental Protection Act (415 ILCS 5/57) that Illinois Professional Geologists have the education, training, experience and licensure to conduct and certify soil and groundwater investigations. The Environmental Protection Act provides that Illinois Professional Geologists may certify and submit plans, conduct site investigations and prepare and certify site investigation reports under the Leaking Underground Storage Tank (LUST) program. The design, implementation and reporting of groundwater monitoring programs are routine aspects of LUST site investigations performed by Illinois Professional Geologists. Accordingly, the proposed rule should be revised to include Professional Geologists as another designated professional that may prepare or supervise the design and preparation of groundwater monitoring systems, plans, notifications, and reports under the proposed Section 1100.710.

PROPOSED RULE REVISION REQUEST

The following is offered as language to revise the proposed rule consistent with the request of the AIPG.²

“Section 1100.710 Professional Supervision and Certification

All systems, programs, plans, notifications, reports designed or prepared to comply with this Subpart must be designed or prepared under the supervision of a PE or PG. The PE or PG must affix to all designs, plans, notifications, and reports the name of the engineer or geologist, date of preparation, registration number, professional seal, and a statement attesting to the accuracy of the information.”

² Please note that PE and PG are proposed here because the existing regulations under 35 IAC Part 1100 refer to Professional Engineers and Professional Geologists within subsections of the rule as PE and PG, respectively.



RESUME



Education

B.S., 1981, Geological Sciences, University of Illinois at Chicago
M.S., 1987, Geological Sciences, University of Illinois at Chicago

Professional Registrations

Professional Geologist:
Illinois, No. 196.000263
Indiana, No. IN2042
Wisconsin, No. 882-13
AIPG CPG, No. 10250

Areas of Specialization

Hydrogeology
Groundwater Modeling
Environmental Investigation
Environmental Remediation
Environmental Compliance
Environmental Emergency Response
RCRA, CERCLA, OPA, TSCA, UST
State Cleanup and Voluntary Programs
Expert Witness / Litigation Support

Affiliations

American Institute of Professional Geologists (AIPG), Illinois-Indiana Section, Board Member
Geological Society of America
National Groundwater Association

Martin J. Hamper, P.G. Senior Project Manager/Senior Hydrogeologist

Summary of Experience

Mr. Hamper has more than 29 years of experience focusing on hydrogeology, environmental investigation, remediation and compliance matters in both government and consulting. For nearly five years, Mr. Hamper served as a Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit Writer for United States Environmental Protection Agency's (U.S. EPA) Region 5 (Chicago) dealing with both the technical and administrative requirements of RCRA permitting, enforcement and Corrective Action for all types of treatment, storage and disposal facilities.

Mr. Hamper's consulting experience has included investigation and remediation (including in-situ remediation) projects under state voluntary programs, emergency response, state cleanup, RCRA, CERCLA (Superfund), underground storage tank (UST), Toxic Substances Control Act (TSCA) and Oil Pollution Act (OPA). Mr. Hamper's remediation experience has included contaminants such as light non-aqueous phase liquids (LNAPLs), polynuclear aromatic hydrocarbons (PAHs), styrene, chlorinated solvents, arsenic, lead, hexavalent chromium, polychlorinated biphenyls (PCBs) and asbestos.

Mr. Hamper has experience at a variety of industrial and commercial facilities including transportation, railroads, rail car maintenance facilities, oil refineries, tank farms, pipelines, chemical plants, specialty chemical distribution, integrated iron and steel production and forming, steel shaping and distribution, primary and secondary aluminum production and forming, secondary lead, foundry sand disposal sites, electroplating, paint and resin, hardware, agricultural equipment, magnet wire, hydraulic pump, building materials, vehicles and vehicle parts, industrial lighting, medical equipment, commercial hazardous waste chemical treatment, captive hazardous waste incineration, commercial hazardous waste storage, commercial hazardous waste thermal treatment, recreational shooting range, recycling, drum recycling, waste storage pond, and hazardous and solid waste landfills, landfarms, coal combustion waste, oil and former manufactured gas plants (MGPs).

In addition, Mr. Hamper has experience conducting projects such as environmental compliance, environmental due diligence, remediation, cost estimating, environmental insurance underwriter support, Phase I and II Environmental Site Assessments (ESAs), unknown waste characterization, RCRA closure, RCRA permitting, groundwater modeling, aquifer characterization, aerial photograph interpretation, hydrogeological studies, groundwater supply, waste/soil treatability studies, landfill studies, emergency response, litigation support and expert witness.



Martin J. Hamper, P.G.

Cont'd

Publications and Presentations

- Hamper, Martin, J. *An Evaluation of Selected EPA Methods to Estimate Aqueous Diffusion Coefficients and Understanding the Relative Importance of Diffusion in Contaminant Transport and Remediation*, Air & Waste Management Association accepted for June, 2013 Annual Meeting, Chicago, Illinois.
- Hamper, Martin, J., *Small Quantity Generators and Satellite Accumulation*, Chemical Industry Council of Illinois (CICI) RCRA Hot Topics Seminar, January 29, 2013, Willowbrook Conference Center, Willowbrook, Illinois.
- Hamper, Martin, J. *RCRA Refresher*, 7th Annual Lake County Local Emergency Planning Committee Training Seminar, University Center, Grayslake, Illinois, November 14, 2012.
- Hamper, Martin, J. *Understanding the Basic Vocabulary, Structure and Requirements of RCRA*, 24th Annual Chicagoland Safety and Health Conference, Naperville, Illinois, September 19, 2012.
- Hamper, Martin, J. *Brief Overview of America's Responses to Major Environmental Problems*. AIPG/AIH 2011 Geosciences: The Road to a Sustainable Future Conference, Bloomingdale, Illinois. September 10-13, 2011.
- Hamper, Martin, J. and Reinganum, Charla. *LNAPL Recovery Evaluation Using API LNAPL Distribution and Recovery Model*. AIPG/AIH 2011 Geosciences: The Road to a Sustainable Future Conference, Bloomingdale, Illinois. September 10-13, 2011.
- Hamper, Martin, J. *RCRA Primer, Understanding the Basic Vocabulary, Structure and Requirements of RCRA*. Chemical Industry Council of Illinois. November Meeting. November 16, 2010.
- Hamper, Martin, J. *Hazardous Material Spill Response Waste Management Considerations*. Air & Waste Management Association. Indiana Chapter Newsletter. October 2010.
- Hamper, Martin, J. *Oil Spill Response PPE Experience for the Gulf of Mexico Spill Response*. Chemical Industry Council of Illinois. Fall Meeting. October 12, 2010.
- Hamper, Martin, J., Sobanski, Joseph, Landis, Marcella, Song, Xin, Leone, Gaston, and Bartelt, Richard. *Simulation of Groundwater Protection System Alternatives for the Thornton Composite Reservoir of the Metropolitan Water Reclamation District of Greater Chicago Tunnel and Reservoir System*. 33rd International Association of Hydraulic Engineering & Research Congress, Vancouver, British Columbia, Canada, August 9-14, 2009.
- Hamper, Martin, J., Bartelt, Richard, E., and Edith A. Ardiente, *Successful In-Situ Treatment of Chromium Contaminated Groundwater*, Air & Waste Management Association 101st Annual Conference and Exhibition, Portland, OR, June 24-27, 2008.
- Hamper, Martin J. *Manufactured Gas History and Process*. Environmental Forensics, 7: 55-64, 2006.
- Hamper, Martin, J. "Field Soil Classification," ARCADIS Geraghty & Miller In-House Training Services, February 20, 2004.
- Hamper, Martin, J. "Groundwater Flow and Potentiometric Map Preparation," ARCADIS Geraghty & Miller In-House Training Services, March 31, 2003.
- Hamper, Martin, J. "Environmental Compliance Auditing", Executive Enterprises Environmental Regulation Course, Chicago, Illinois, June 2001.
- Hamper, Martin, J. "Phytotechnologies, and RCRA Corrective Action Update", ARCADIS Geraghty & Miller In-House Training Services, April 26, 2001.
- Hamper, Martin, J. "Phyto-Cover at a RCRA Site" Invited speaker at the Region 5 USEPA RCRA Corrective Action Conference, Chicago, Illinois, January 17 - 18, 2001.
- Hamper, Martin, J. "Bouwer & Rice through Time; The Mathematical Basis for Bouwer & Rice Slug Test Analysis Equation", ARCADIS Geraghty & Miller In-House Training Services, August 28, 2001.
- Hamper, Martin, J. "Advanced RCRA Seminar", Papers presented at an Executive Enterprises Environmental Regulation Course, Chicago, Illinois, October 1996.
- Hamper, Martin, J. "The Resource Conservation and Recovery Act", Paper presented at an Executive Enterprises Environmental Regulation Course, Chicago, Illinois, May 1996.
- Hamper, Martin, J. "How the Resource Conservation and Recovery Act Affects your Day to Day Business", Paper presented at an Executive Enterprises Environmental Regulation Course, Chicago, November 1995.
- Hamper, Martin, J. "The Resource Conservation and Recovery Act", Paper presented at an Executive Enterprises Environmental Regulation Course, Chicago, Illinois, March 1995.
- Hamper, Martin J. "An Introduction to the Resource Conservation and Recovery Act", Paper presented at an Executive Enterprises Course, Chicago, Illinois, May 1994.
- Hamper, Martin J. "Technical Requirements of RCRA", Paper presented at an Executive Enterprises Environmental Regulation Course, Chicago, Illinois, May 1993.



Martin J. Hamper, P.G.

Cont'd

Hamper, Martin J. "*How Clean is Clean, A Consultants Perspective.*" Paper presented at the UST and LUST Technology Transfer Seminar, Springfield, Illinois, September 1992.

Hamper, Martin J. *Corrective Action's Impact on Business.* Pollution Engineering, September 1992.

Hamper, Martin J. "*An Up to Date Look at the Resource Conservation and Recovery Act.*" Paper presented at an Executive Enterprises Environmental Regulation Course, Chicago, Illinois, June 1992.

Hamper, Martin J. "*Technical Requirements of the RCRA Corrective Action Program.*" Paper presented at an Executive Enterprises seminar on Responding to the New Hazardous Waste Initiatives: Land Disposal, TCLP, and Corrective Action Programs, Chicago, Illinois, June 1991.

Hamper, Martin J. "*The New Illinois Groundwater Standards, How Will They Affect You?!*" Paper presented at the Illinois Environmental Regulation Conference, Chicago, Illinois, March 1990.

Hamper, Martin J. and James A. Hill. *Groundwater Source Separation Using Chlorinated Organic Compound Degradation Series and Inorganic Indicators.* Superfund '89, Proceedings of the 10th National Conference, November 27-29, 1989, Washington, D.C.

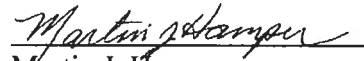
Hamper, Martin J. Suspended-Sediment Transport in Glacier-Fed Lake Louise, Banff, Alberta, Canada. Geological Society of America Abstracts, 1983.

PROOF OF SERVICE

I, MARTIN J. HAMPER, certify that I have served the attached **Notice of Filing and Pre-Filed Testimony of Martin J. Hamper, PG, CPG**, by U.S. Mail, first class postage prepaid, on May 13, 2013, to the following:

<p>John Therriault, Clerk Illinois Pollution Control Board James R. Thompson Center 100 West Randolph Street, Suite 11-500 Chicago, IL 60601</p>	<p>Marie Tipsord, Hearing Officer Illinois Pollution Control Board James R. Thompson Center 100 W. Randolph St., Suite 11-500 Chicago, IL 60601</p>
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<p>James Huff, Vice President Huff & Huff, Inc. 915 Harger Road, Suite 330 Oak Brook, IL 60523</p>	<p>Michelle A. Gale and Dennis M. Wilt, Vice President Waste Management 720 E. Butterfield Road Lombard, IL 60148</p>

<p>Kevin S. Richards, Ph.D., PE, LPG Chair, AEG-NC North Central Section, Assoc. of Environmental & Engineering Geologists 1530 Willow Street Lake Forest, IL 60045</p>	<p>James M. Morphey Sorling, Northrup, Hanna, Culle & Cochran, Ltd. Suite 800 Illinois Building 607 East Adams – PO Box 5131 Springfield, IL 62705</p>
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