

IES

SPRING EDITION
1999



ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
PHILADELPHIA SECTION

What *IS* Lighting Certification???

Carl M. Watson, PE, CLEP, LC

Lighting is the single most important element in the visual environment. Effective lighting improves productivity, sales and security. Lighting consumes up to 40 percent of the electricity used in buildings. A well-designed lighting system, when properly installed and operated, reduces energy, maintenance and potential liability costs. Lighting systems also have significant interactions with other building systems and equipment. Substantial improvements in lighting technology offer an expanding range of solutions, yet make the process of lighting design and its application more complex. Therefore, it is increasingly important to differentiate competent and capable lighting practitioners who can effect these solutions.

The lighting industry had evolved over the last several decades. Today, a variety of people with many different backgrounds are engaged in the practice of the art and science of lighting. There is a real benefit to be gained by having a recognized credential procedure that can identify those individuals with the required lighting expertise. Lighting certification *is* a means to demonstrate the attainment of a signifi-

cant level of specialized technical knowledge about lighting and its application. Lighting certification *is not* equivalent to the much more comprehensive professional licensure, such as that held by a Registered Professional Engineer or Registered Architect. With some effort, an individual who has a broad range of knowledge and experience in lighting can become certified.

Currently, three organizations offer a form of lighting certification. Successful completion of an examination is common to each of the three certifications. Applicants are screened for the appropriate academic background and professional experience. There is also a requirement to be of good character and to have standing in the lighting industry. Each organization has a code of conduct, and requires continuing education in order to maintain the certification.

One of the earliest organizations to offer lighting certification is the Association of Energy Engineers in Atlanta, Georgia. Founded in 1977, AEE created the designation CEM, or Certified Energy Man-

(Continued on page 2)

Hazardous: Mercury-containing Lamps

John Chilcott, NCQLP, Chairman of the Regulatory Affairs Committee, IESNA

The U.S. Environmental Protection Agency (EPA) has decided to add spent mercury-containing lamps to the Universal Waste Rule (UWR), thereby ending several years of delay, controversy and some last minute uncertainties. The Agency announcement is expected to be published in the Federal Register in April, and implementation is expected in September. In summary the Universal Waste Rule impact will mean that as long as mercury containing lamps are recycled, they will not be subject to the hazardous waste regulations.

The EPA had been lobbied on both sides of the lamp issue for several years. On one hand,

lamp manufacturers wanted to see their product exempted from hazardous waste classification, while on the other side, environmentalists, states, recyclers and EPA regions argued against a regulatory exemption for a known hazardous waste in favor of including lamps in the Federal Universal Waste Rule.

As posted several years ago in the Federal Register, EPA proposed to either exempt mercury-containing lamps from existing Resource Conservation and Recovery Act (RCRA) hazardous waste regulations or add them to the Universal Waste Rule. Most lamps discarded

(Continued on page 3)

What IS Lighting Certification???

(Continued)

ager. In 1991, a more specialized certificate program called CLEP, or Certified Lighting Efficiency Professional was added. The CLEP examination covers energy codes, lighting calculations, economics, electric power considerations, energy management, controls and environmental concerns. AEE's testing process is handled by an independent agency. There are currently over 500 CLEP recipients across the nation.

Another organization which grants lighting certification in the interNational Association of Lighting Management Companies, or NALMCO, in Des Moines, Iowa. It was founded in 1953, and in 1988 began offering its CLMC or Certified Lighting Management Consultant designation. The CLMC examination covers lighting equipment, safety, maintenance, trouble shooting, controls, utility rates and energy management. NALMCO's testing is conducted by its own Certification Board,

through a process which withholds the identity of the applicant until the examination is graded and certification has been granted. About 100 individuals have received the CLMC designation.

The most recent organization to provide certification in lighting is the National Council on Qualifications for the Lighting Professions in Bethesda, Maryland. NCQLP is not a technical society or an industry trade group. It is an independent coalition of academic, governmental, professional, research, manufacturer, and end user organizations. Begun in 1997, NCQLP certification is a voluntary, industry-led effort. It covers a broad range of lighting issues including safety, health, productivity, quality, energy, environmental, design, regulatory, technology and industry practice. The examination is administered by an independent third party testing agency. Certificants can use the designation "LC" (Lighting

Certified) after their name. As of 1999, there are over 600 individuals who have earned the LC distinction in the United States and Canada.

What is important to remember about lighting certification is that it provides one means of distinguishing qualified lighting professionals. Being certified is a recognition of achievement for those who have met specific standards, as measured by a systematic evaluation of their knowledge and skills. At least one major lighting manufacturer has been requesting lighting certified candidates for their organization. In the future, it is anticipated that discerning lighting consumers will be more likely to select their goods and services from those who have some form of lighting certification. •

Author –
Carl Watson, PE, CLEP, LC

LAMPLIGHTERS

The Lamplighters of Delaware Valley announces the election of Officers for the 1999-2001 term:

Joseph Doyle – Chief Lamplighter
Doug Boughton – Asst. Chief Lamplighter
Chuck Oerkvitz – Wick Trimmer (Secretary)
John Kostic – Lamp Changer (Treasurer)

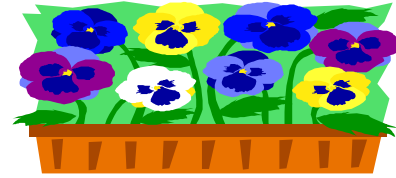
Lamplighters was formed in 1962 as an association of roadway lighting professionals with a common interest in expanding the use of highway lighting as a night-time safety device.

IES shares a joint dinner meeting with Lamplighters each April. This year's topic was the "Independence Mall Redesign Project" and its new lighting plan.



We're on the WEB!!! Visit us at
www.iesphl.org

Hazardous: Mercury-containing Lamps (Continued)



today fail the EPA toxicity test and must be managed as hazardous waste. The tide appeared to change in favor of EPA adding lamps to the Universal Waste Rule for several primary reasons.

First-EPA released its long awaited "Mercury Study to Congress" which outlined mercury emission sources and human exposure risks. A "major" source of mercury emissions identified in the Report is the Incineration of mercury-containing waste, and mercury lamps are one of the largest sources of mercury in municipal waste.

Second, EPA began to realize that mercury emissions from lamp breakage (before disposal) was a significant concern, as stated in EPA's Final Report: Mercury Emissions from the Disposal of Fluorescent Lamps. Also, in 1997, the White House Council on Environmental Quality was said to support adding lamps to the Universal Waste Rule. Several EPA regions, including Regions 1,5, and 9 have long opposed exempting lamps from hazardous waste regulations, as exemplified in the 1995 letter from Region 5 Administrator to USEPA:

"I believe to have an official pronouncement that mercury is not a hazardous waste simply sends the wrong message to the public and the regulated community...The USEPA seems to be acting inconsistently when simultaneously establishing maximum available control technologies for mercury in the Great Lakes under the Clean Water Act, placing priority on the cleaning up mercury contaminated Superfund Sites, but also proposing to exempt mercury-containing lamps from RCRA requirements for hazardous waste."

Since 1992, Lamp Manufacturers, along with their industry friends extensively lobbied the EPA, and state agencies across the country to exempt lamps from

the hazardous waste regulations. The primary reason stated is that the cost of proper management would discourage group relamping with more energy efficient fluorescent lamps which would result in higher demand for coal-fired electricity, resulting in increased electrical demand and therefore more mercury releases to the environment.

Although EPA and a number of states have presented clear evidence that the cost of proper management does not effect the changeover to energy efficient lighting, the manufacturers were unsuccessful in rebutting the argument. EPA stated in its June 30, 1997 Final Report: Mercury Emissions from the Disposal of Fluorescent lamps that "Disposal costs are a small fraction of the upgrade to energy efficient lighting, generally accounting for less than 1 per cent of the costs, and in a series of interviews with firms declining to participate in the EPA Greenlights program, lamp disposal costs and issues were never mentioned as a reason for not participating."

A few years ago one of the major lamp manufacturers began opposing the lamp in exemption in support of the universal waste approach. Seeking a market advantage, the lamp manufacturer began selling low mercury lamps the passed the EPA toxicity test and can be legally disposed of as municipal waste, although recommending that the lamps be recycled.

At the meeting of the Mercury Containing Summit on January 11, 1999 all major lamp manufacturers indicated that they would support the Universal Waste Regulation if adopted by EPA.

Around forty states have added or intend to add mercury-containing lamps to their state-authorized universal waste rules. In letters to EPA, both the 50 state waste management officials association,

and states' air officials association, strongly oppose exempting hazardous lamps from the Subtitle C hazardous waste regulations, and instead showed a preference for adding lamps to the Universal Waste Rule.

Environmental groups, including the National Wildlife Federation, Environmental Defense Fund, U.S. Public Interest Research Group, Friends of the Earth, and the Sierra Club have opposed allowing hazardous lamps to be disposed of in municipal solid waste.

Under Universal Waste Rules generators who elect to recycle mercury-containing lamps are allowed to use a bill of lading for transportation and are not required to obtain an EPA identification number as a generator of hazardous waste. Management standards for transporters of universal waste lamps will be the same as those applicable to other types of universal waste. Destination facilities (e.g. recycling facilities and treatment and disposal facilities) would remain subject to all applicable hazardous waste permitting and management requirements under RCRA.

Thus with the addition of mercury containing lamps to the Universal Waste Rule we should see an increase in the Recycling of Lamps in the near-distant future. •

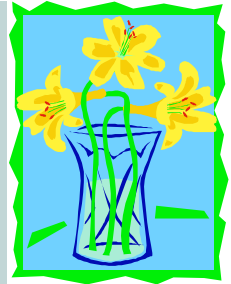
Author – John Chilcott, IESNA, NCQLP, Founder, President, and CEO of Earth Protection Services, Inc. a Pheonix, Arizona based Recycler with offices around the US including Lancaster, PA. Mr. Chilcott has actively advocated the proper disposal of lamps and ballasts since the late 1980's. Mr. Chilcott is a member of the Illuminating Engineering Society serving as Chairman of the Regulatory Affairs Committee.

IES**ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
PHILADELPHIA SECTION**

c/o Electrical Association of Philadelphia
40 Monument Road, Suite 107
Bala Cynwyd, PA 19004
Phone: 610-668-1700 Ext. 10

TECH FORUM NEWSLETTER

EDITORS: Mary Alcaraz, PE, Gary Golaszewski, PE
COMMITTEE: Kathy Beacher, LC, Li Huang, Jeff Long, Carl Watson,
PE, CLEP, LC

**UPCOMING
IES PROGRAMS 1998-99**

5/18/99
EMORY ZIMMERS MEMORIAL
1999 ANNUAL GOLF OUTING

6/18/99
INSTALLATION OF OFFICERS AT
WILLIAM PENN RESTAURANT

1998 – 1999 IES OFFICERS

President – Gordon Pevzner

Vice President – Larry Abramovitz

Treasurer – Kathy Beacher, LC

Secretary – Gerry Power

We're on the WEB!!! Visit us at
www.iesphl.org

**International Illumination
Design Awards (IIDA) – 1999
Philadelphia Section****Welcome New IES Members
(as of January 1999)**

Theodore Archer, Archer Electric
David Brown, Penn Lighting Associates
Charlie Bulina, Holophane Corp.
William J. Curley, Berley Systems
Joseph A. Gothard, Professional Systems Engineers
Jeff Heller, Lighting by Stanley
Gersil N. Kay, Conservation Lighting Int'l.
Tracey Merritt, Endecon
Craig Miller, ANG Associates (and Sustaining Member!)
Shashikant Pradhan, Global Engineering Assoc., Inc.
Judith Schiller, Schiller & Hersh Associates
Donna Sink, AOL-B Architects
Lisa Sullivan, Osram-Sylvania
Michelle Smith, RPA Associates
Elizabeth J. Weiss, DLR Group

Section Award Recipients**Portland Public Market**

The Lighting Practice
Alfred R. Borden, IV
Michael A. Barber
Hugh A. Boyd

**Philadelphia High School
For the Performing Arts**

The Lighting Practice
Alfred R. Borden, IV
Julie Pannasow

**PECO Energy 25th Floor
Video Teleconference Center**

Illume Creatif
Patricia A. Pitzer

**MBNA School of Business,
Univ. of Delaware**

The Lighting Practice
Helen Diemer
Saskia Kok-Tricomi

Congratulations! Philadelphia LC's!!

Philip T. Acone, LC
Kathy Beacher, LC
John F. Beiter, LC
Diane Berrian-Viola, LC
Alfred R. Borden, IV, LC
Anthony T. Carango, LC
James G. Cardinal, LC
Mario S. Gallo, LC
Gary A. Garofalo, LC
Raymond Grenald, LC
Ronald Lewis, LC
Joseph F. Lichon, Jr., LC
Thomas G. Lyman, LC

Michelle Morin, LC
Karen P. Murphy, LC
S. Bruce Palmer, LC
Thomas P. Petersen, PE, LC
Gerard J. Power, LC
David D. Rodstein, LC
John C. Sarkioglu, LC
Sandra M. Stashik, PE, LC
Corinne Strumpf-Belfer, LC
Reynold J. Territo, LC
J. Luke Tigue, LC
Lee Waldron, LC
Carl M. Watson, PE, CLEP, LC