

U.S. Consumer Product Safety Commission
LOG OF MEETING

CPSA 6 (b)(1) Cleared

5/29/01
No Writs/Priv. Libs or

Products Identified

Excepted by _____

Firms Notified, _____

Comments Processed, _____

2001 MAY 25 P 12:56
SECRETARY
REGISTRATION

SUBJECT: Underwriters Laboratories Electrical Council meeting on electrical safety issues

DATE OF MEETING: May 7-9, 2001

LOG ENTRY SOURCE: Doug Lee, ESEE

DL

DATE OF LOG ENTRY: May 25, 2001

LOCATION: Oak Brook, IL

CPSC ATTENDEE(S):

Doug Lee, ESEE

William H. King, Jr., ES (a.m. on May 8 only)

NON-CPSC ATTENDEE(S):

James Beyreis, Underwriters Laboratories Inc (UL)

Lee Dosedlo, UL

and members of the UL Electrical Council (see attached)

SUMMARY OF MEETING: Mr. Lee met with the Electrical Council members for discussions on a wide range of fire and electrical safety topics. See attached copy of the meeting agenda. UL will provide a summary of the discussion in their report on the meeting.

TABLE OF CONTENTS

1.0	WIRE AND CABLE	1
1.1	AC & MC CABLE AMPACITY	1
1.2	COMPACT COPPER CONDUCTOR WIRE	2
1.3	MARKINGS ON NM CABLES	3
2.0	WIRING METHODS	4
2.1	ALUMINUM WIRE CONNECTORS	4
2.2	PUSH-IN WIRE CONNECTORS	5
2.3	FIRE CONTROL PANEL SUPPLY CONNECTION	6
2.4	ELECTRICAL METALLIC TUBING (EMT) RAIN TIGHT FITTINGS	7
2.5	SILICONE RUBBER/RHH INSULATED CABLES INSTALLED IN RIGID CONDUIT	8
2.6	MANUFACTURED WIRING SYSTEMS vs. WIRING ASSEMBLIES	9
2.7	LOW-SMOKE, ZERO HALOGEN CABLE (LSZH)	10
3.0	CIRCUIT PROTECTION	11
3.1	GROUND FAULT CIRCUIT INTERRUPTERS	11
3.2	ARC FAULT CIRCUIT INTERRUPTERS	12
3.3	TRANSIENT VOLTAGE SURGE SUPPRESSORS (TVSS)	12A
3.4	TRANSFORMER CONNECTIONS	12B
3.5	SERIES RATED CIRCUIT BREAKER SYSTEMS	12C
4.0	APPLIANCES, EQUIPMENT AND SYSTEMS	13
4.1	AIR CONDITIONER NAMEPLATE INFORMATION	13
4.2	SERVICE EQUIPMENT COVERS	14
4.3	SEMICONDUCTOR MANUFACTURING EQUIPMENT	15
4.4	UL LISTING OF MOTORS	16
4.5	LISTING OF TRAFFIC SIGNAL SYSTEMS	17
4.6	SAUNA HEATING EQUIPMENT AND ENCLOSURES	18
4.7	UL's LISTING OF MEDIUM VOLTAGE EQUIPMENT	19
4.8	LASERS USED IN EQUIPMENT	20
4.9	ROPE LIGHTS	21
4.10	METAL HALIDE LAMPS	22

4.11	SIGN POWER SOURCE	22A
4.12	SWITCHBOARD MARKING.....	22B
4.13	FIRE PUMP CONTROLLER.....	22C
4.14	UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS.....	22D
5.0	NEW DEVELOPMENTS	23
5.1	UL 2200 EMERGENCY GENERATOR ACTIVITIES.....	23
5.2	FUEL CELLS.....	24
5.3	HOLLOW TUBE, CHEMICALLY CHARGED ROD ELECTRODES.....	25
5.4	APPLIANCE RATINGS.....	26
5.5	AGED ELECTRICAL WIRING SYSTEMS IN BUILDINGS	27
6.0	UL STANDARDS, DIRECTORIES, AND SERVICES	28
6.1	HARMONIZATION OF U.S. & CANADIAN STANDARDS.....	28
6.2	CANENA PROJECTS.....	29
6.3	STANDARDS IN OTHER LANGUAGES	30
6.4	DURABILITY AND FORMAT OF WARNING LABELS.....	31
6.5	CONTINUOUS MAINTENANCE METHOD OF STANDARDS DEVELOPMENT.....	32
6.6	UL COUNCIL MAILING PROCEDURES	33
6.7	PRINT DIRECTORY REORGANIZATION, CHANGES TO ONLINE INFORMATION, AND MARKING GUIDES.....	34
6.8	CE MARKING AND UL CLASSIFICATIONS TO IEC STANDARDS	35
6.9	FIELD REPORT PROGRAM.....	36
6.10	ICC ELECTRICAL CODE	37
6.11	TRANSFER SWITCHES.....	38
6.12	UL/IAEI TAP MEETING REPORT	39

**MEMBERS OF ELECTRICAL COUNCIL
OF UNDERWRITERS LABORATORIES INC.**

**James R. Beyreis, Chairman
Lee J. Dosedlo, Vice Chairman**

Mr. Tim Arendt
Chief Electrical Inspector
City of Chicago
Bureau of Electrical Inspection
3rd Floor
2240 W. Ogden
Chicago, IL 60612

Mr. Richard G. Alford
Chief Electrical Inspector
City of Seattle
Department of Construction
and Land Use
710 Second Avenue, Suite 200
Seattle, WA 98104-1702

Mr. George Anchaes, CBO
Inspector
County of San Bernardino
Building & Safety
385 N. Arrowhead Ave.
San Bernardino, CA 92415-0181

Mr. Carl Blechschmidt
Senior Managing Consultant
Verhalen & Associates
6867 Elm Street, Suit 300
McLean, VA 22101-3846

Mr. Joseph M. Bolesina
Chief Electrical Inspector
Pinellas County Building Dept.
310 Court Street
Clearwater, FL 34616

Mr. Merton W. Bunker, Jr., P.E.
Chief Electrical Engineer
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

Mr. Jimmy Carpenter
Chief Electrical Engineer
State Electrical Inspector
North Carolina Dept. of Insurance
P.O. Box 26387
Raleigh, NC 27611

✓ Mr. Andre R. Cartal
Building Department
Borough of Princeton
P.O. Box 390
Princeton, NJ 08542
or
936 Morgan Dr.
Yardley, PA 19067

Mr. William F. Clark
7711 George Lane
Dixon, CA 9620

Mr. Donald R. Cook
Shelby County Building Inspections
1123 County Services Drive
Pelham, AL 35124

Mr. Phil Cox
Executive Director
901 Waterfall Way
Suite 602
Richardson, TX 75080

Mr. Robert C. Duncan
Reedy Creek Improvement District
P.O. Box 135095
Clermont, FL 34713-5095

Ms. Erlinda Edwards
U.S. Consumer Product Safety
Commission
4330 East West Highway, Room 611
Bethesda, MD 20814-4408

Mr. R. J. Edenfield
Consulting Inspector
2811 Farrar Place
Augusta, GA 30909

Mr. Russell J. Helmick, Jr.
Supervising Electrical Inspector
City of Irvine
P.O. Box 19575
Irvine, CA 92713

Mr. Joseph A. Hertel
Supervising Electrical Engineer
State of Wisconsin
Safety & Building Division
Electrical Unit
P.O. Box 7969
Madison, WI 53707

Mr. Kenneth T. Higashi
Sr. Electrical Inspector
Electrical Inspections
City and County of Honolulu
1717 G Palolo Ave.
Honolulu, HI 96816

Mr. Bruce A. Jackson, SEA 03Z72
Commander
Naval Sea Systems Command
2531 Jefferson David Hwy.
Arlington, VA 22242-5160

Mr. Gonzalo Delgadillo López
Calle 37 Sur No. 28-05
Envigado, Antioquia
COLOMBIA
South America

Mr. Rene Leduc
Technical Administrator/Chief
Electrical Inspector, Safety Services
Alberta Municipal Affairs
16th Floor, Commerce Place
Edmonton, Alberta T5J 4L4

Mr. Elver L. Madsen
2684 Cobra Drive
East Helena, MT 59635

Mr. Gary L. Malmen
Electrical Division Administrator
Department of Labor
and Industrial Services
State of Idaho
P.O., Box 83720
Boise, ID 83720-0028

Mr. Leo F. Martin
Martin Electrical Consulting
and Technical Training Services
P.O. Box 1313
North Falmouth, MA 02556

✓ Mr. Robert A. McCullough
Director
Ocean County Construction Inspection
Dept.
2 Mott Place Complex
Washington, St.
P.O. Box 2191
Toms River, NJ 08754

Mr. Lanny McMahill
Electrical Inspection Supervisor
City of Phoenix
Development Services Department
200 W. Washington St.
Phoenix, AZ 85003

Mr. Robert M. Milatovich
Senior Electrical Inspector
Clark County
Department of Building
5051 S. Paradise Road
Las Vegas, NV 89119

Mr. Robert E. McKenzie
Chief Electrical Code Administrator
City of Dallas
Building Inspection Division
Dept. of Economic Development
Oak Cliff Municipal Center, Room 105
320 E. Jefferson Blvd.
Dallas, TX 75203

Mr. Marvin A. Millet
Electrical Section Supervisor
CEDA – Building Services
City of Oakland
250 Frank Ogawa Plaza, Suite 2340
Oakland, CA 94612

Mr. Ted Olechna, P. Eng.
Provincial Code Engineer
Electrical Safety Authority
155A Matheson Blvd. W., Ste. 202
Mississauga, Ontario L5R 3L5
Canada

Mr. Richard P. Owen
Chief Electrical Inspector
Office of License Inspections and
Environmental Protection
City of St. Paul
350 St. Peter Street, Suite 300
St. Paul, MN 55102-1510

Mr. Milton Patterson
Chief Electrical Inspector
Electrical Plan Review
and Permit Issuance
121 N. LaSalle Street
Room 83
Chicago, IL 60602

Ing. Pedro Sanhua Pineda
P.O. Box 121778
Chula Vista, CA 91912-6478

Mr. Dennis Rowe
General Manager & Vice President
The New York Board of Fire
Underwriters
40 Fulton Street, 6th Floor
New York, NY 10038

Mr. James A. Ruggieri
Chief, Electrical Engineer
United States Coast Guard
G-MSE-3, Room 13001
2100 Second St., S.W.
Washington, DC 20593-0001

Mr. John A. Schultz
Executive Secretary
State of Minnesota Board of Electricity
1821 University Ave.
Ste S-128
St. Paul, MN 55104-2993

Mr. John Schwab, Jr.
Electrical Inspector
City of Wauwatosa
7725 W. North Avenue
Wauwatosa, WI 53213

Mr. James G. Stallcup
Chief Electrical Inspector
for City of Westover Hills, TX
4308 Broadway Ave.
Ft. Worth, TX 76117

Mr. Ted Stutheit
Chief Electrical Inspector
City of Lincoln
County-City Building
555 So. 10th Street
Room B-144
Lincoln, NE 68508

Mr. Steve Tobin
Electrical Inspector
City of Vandalia
333 James E. Bohanan Memorial
Drive
Vandalia, OH 45377

Mr. Thomas E. Trainor
Chief Electrical Inspector
The City of San Diego
Building Inspection Department –
MS 74
9601 Ridgehaven Ct. #220
San Diego, CA 92123-1636

Mr. George K. Waterhouse
Program Director
State of Colorado
Electrical and Plumbing Boards
Department of Regulatory Agencies
Division of Registrations
1580 Logan Street, Suite 500
Denver, CO 80203-1939

Gary A. Wilson
Chief Electrical Inspector
State of Oregon
Dept. of Consumer and
Business Services
P.O. Box 14470
Salem, OR 97309-0404

**MEMBERS OF FIRE COUNCIL
OF UNDERWRITERS LABORATORIES INC.
Northbrook, Illinois**

**James R. Beyreis, Chairman
William Metes, Vice Chairman**

Kathleen H. Almand
Executive Director
Society of Fire Protection Engineers
7315 Wisconsin Avenue
Suite 1225W
Bethesda, MD 20814

Art Black
Carmel Fire Protection Assoc.
P. O. Box 7168
Carmel-by-the-Sea, CA 93921

Herman Brice
Administrator
Palm Beach County Fire Rescue
50 S. Military Trail, Suite 101
West Palm Beach, FL 33415-3198

Kennith D. Brock
Senior Vice President -
Loss Prevention
HSB Industrial Risk Insurers
85 Woodland Street
P. O. Box 5010
Hartford, CT 06102-5010

Pat D. Brock
Associate Professor, FIRET
Oklahoma State University
303 Campus Fire Station
Stillwater, OK 74078-0306

John Canestro, PE
Consultant
4747 Mira Vista Dr.
Suite 201
Castro Valley, CA 94546

Robert Cormier
Fire Marshal
Department of Labour
P. O. Box 697
5151 Terminal Road
Halifax, Nova Scotia
Canada B3J 2T8

Mary L. Corso
State Fire Marshal
State of Washington
General Administration Building
P. O. Box 42600
Olympia, WA 98504-2600

Tony Crimi
Vice President, Technical Services
and Chief Engineer
Underwriters' Laboratories of
Canada
7 Crouse Road
Scarborough, Ontario
Canada M1R 3A9

Phillip A. Davis
Vice President
NATLSCO Loss Control Services
Kemper Insurance Companies
1 Kemper Drive
Long Grove, IL 60049

Dr. R. W. Docherty
Assistant Firemaster
Director of Fire Safety
270 Bradshaw Meadows
Bradshaw
Bolton
BL24NF
United Kingdom

Rick Dumala
Fire Commissioner
Ministry of Municipal Affairs
and Housing
P. O. Box 9490 Stn. Prov. Govt.
Victoria, B.C., Canada V8W 9N7

Joseph M. Fleming
Fire Marshal
Boston Fire Department
115 Southampton Street
Boston, MA 02118

Mr. Jan P. Gasterland
City of St. Paul
Building Code Officer
Bldg. Inspection & Design
350 St. Peter, Suite 310
St. Paul, MN 55102

Robert Gazdik
Property Loss Control Manager
St. Paul Fire and Marine
Insurance Co.
385 Washington Street, MC 505E
St. Paul, MN 55102

Tony Gumkowski
Senior Engineering Specialist
Casualty-Property-Commercial
Lines Dept.
The Travelers Insurance Co.
One Tower Square - 8SB
Hartford, CT 06183-4070

Paul K. Heilstedt
Chief Executive Officer
Building Officials & Code
Administrators International, Inc.
4051 W. Flossmoor Rd.
Country Club Hills, IL 60478

Alfred J. Hogan
Chief Fire Protection Engineer
Reedy Creek Improvement District
P. O. Box 10170
Lake Buena Vista, FL 32830-0170

Mark Jachniewicz
Director of MEA, Division
The City of New York
Department of Buildings
Material & Equipment Acceptance
60 Hudson Street, 14th Floor
New York, NY 10013

Sultan M. Javeri
Guthel Maroe
Z.A.C. de la Pierre Tourneville
Isles Les Villenoy
77450 Esbly
France

Gerald H. Jones
1100 W. 122nd Street
Kansas City, MO 64145

William H. King, Jr.
U.S. Consumer Product Safety
Commission
Washington, DC 20207

L. L. Litchfield, PE
Deputy Director of Development
Services
City of Phoenix
200 W. Washington
Phoenix, AZ 85003

Ms. Margaret Mahoney
Director
City of Portland
Office of Planning & Development
Review
1900 SW 4TH Avenue
Portland, OR 97201

Eugene Marotta
Chief, Fire Prevention Unit
Office of the Fire Commissioner
of Canada
Phase II, Place du Portage
Hull, Quebec
Ottawa, Ontario K1A 0J2
Canada

Trevor Martin
Policy & Procedure Manager
Building Control Service
Health & Environmental Services
Belfast City Council
City Hall
Belfast
BT15GS
Northern Ireland
United Kingdom

Rick McCullough
Fire Commissioner
Office of the Fire Commissioner
1855 Victoria Avenue
Regina, Saskatchewan
Canada S4P 3V7

James A. Milke
Assistant Professor
Dept. of Fire Protection Eng.
Room 0151, Engineering Bldg.
University of Maryland
College Park, MD 20742

G. W. Murdoch
Deputy Building Official
City of Chula Vista
Planning and Building Dept.
276 Fourth Avenue
Chula Vista, CA 91910

Jack Nicholas
Instructor, Fire Protection
Northeast Wisconsin Technical
College
1601 University Dr.
Marinette, WI 54143

John H. Nosse, PE
President
ICBO Evaluation Service, Inc.
5360 S. Workman Mill Road
Whittier, CA 90601

Ron Perkerewicz
Director
Kitsap County Dept. of Community
Development
10000 Central Valley Road
Bremerton, WA 98311

Martin H. Reiss
President & CEO
Rolf Jensen & Associates, Inc.
1661 Worcester Road, Suite 501
Framingham, MA 01701

James C. Roberts, PE
Deputy Commissioner of Insurance
State Property Fire Insurance
Fund Div.
NC Department of Insurance
410 N. Boylan Ave.
P. O. Box 26387
Raleigh, NC 27603

Mr. Max R. Schmidt
NFPA Regional Manager
Aquiles 144
Mexico DF 01820

Kevin Scott
Assistant Fire Marshal
Kern County Fire Department
5642 Victor Street
Bakersfield, CA 93308-4056

Jim W. Sealy
Architect/Consultant
1320 Prudential Drive
Suite 101
Dallas, TX 75235-4117

Arthur C. Smith
Secretary
NY Board of Fire Underwriters
40 Fulton Street, 6th Floor
New York, NY 10038

Walter Smittle III
219 Simmons Drive
Ripley, WV 25271

Robert E. Solomon
Chief Building Fire Protection
Engineer
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

Scott Stookey
Phoenix Fire Department
Urban Services Division
Special Hazards Unit
Phoenix, AZ 85034-2301

Terrell Stripling
Associate Fire Protection Engineer
Southern Building Code Congress
International, Inc.
900 Montclair Road
Birmingham, AL 35213-1206

David W. Stroup, PE
Fire Protection Engineer
NIST
Building and Fire Research
Laboratory
Building 224, Room A345
Gaithersburg, MD 20899-0001

J. L. Tidwell
Fire Marshal
Fort Worth Fire Department
1000 Throckmorton Street
Fort Worth, TX 76102

Perry C. Tyree
President
Tyree Associates
2527 West Colorado Avenue
Suite 202
Colorado Springs, CO 80904

Klaus Wahle
Commandant (G-MMS-4)
U.S. Coast Guard
2100 Second St., S.W.
Washington, DC 20593-0001

Dean K. Wilson
Senior Engineer
Hughes Associates, Inc.
Fire Protection Engineers
133 Primrose Lane
Windsor, CT 06095-4753

Robert Zalosh
Professor, Fire Protection
Engineering
Worcester Polytechnic Institute
Center for Firesafety Studies
100 Institute Road
Worcester, MA 01609-2280

ASSOCIATE MEMBERS

**Carl F. Baldassarra
President
Schirmer Engineering Corporation
707 Lake Cook Road
Deerfield, IL 60015-4997**

**Harold E. Nelson
Senior Research Engineer
Hughes Associates, Inc.
3610 Commerce Drive, Suite 817
Baltimore, MD 21227**

**Myron J. Sasser, PE
President
Inspection Services, Inc.
4360 Mountaindale Road
Birmingham, AL 35213**

TABLE OF CONTENTS

1.0	FIRE SUPPRESSION EQUIPMENT	1
✓1.1	SPRINKLER PERFORMANCE ISSUES	1
✓1.2	SPRINKLER IDENTIFICATION NUMBER MARKING SYSTEM	2
✓1.3	MICROBIOLOGICALLY INFLUENCED CORROSION	3
✓1.4	WATER MIST NOZZLES	4
1.5	CLASS C RATINGS FOR PORTABLE FIRE EXTINGUISHERS.....	5
2.0	DETECTORS AND ALARM SYSTEMS.....	6
2.1	THERMAL RESPONSE COEFFICIENT (TRC) FOR HEAT DETECTORS.....	6
2.2	CO DETECTOR FALSE ALARMS	7
2.3	LASER DETECTORS	8
2.4	FIRE ALARM ADDRESSABLE INTERFACE MODULES IN NON-CONDITIONED SPACES.....	9
2.5	PREMISE SECURITY LISTINGS.....	10
2.6	BURGLARY AND FIRE ALARM COMPANY LIST.....	11
3.0	SMOKE VENTILATION EQUIPMENT	12
3.1	MODEL CODE ACCEPTANCE OF UL 197 RECIRCULATING HOOD SYSTEMS IN COMMERCIAL COOKING APPLICATIONS.....	12
✓3.2	MANUAL SMOKE/HEAT VENT	13
4.0	FIRE RESISTANCE AND FLAMMABILITY TESTING	14
4.1	FIRE MODELING PROGRAMS	14
4.2	FULL SCALE FIRE TESTS AND FIREFIGHTING PLACARD SYSTEM.....	15
4.3	CHARACTERISTICS OF THE FURNACE, FUEL & HEATING ENVIRONMENT	16
4.4	PRECAST CONCRETE ASSEMBLIES.....	17
4.5	UL 2360 STANDARD FOR TEST METHODS FOR DETERMINING THE COMBUSTIBILITY CHARACTERISTICS OF PLASTICS USED IN SEMI- CONDUCTOR TOOL CONSTRUCTION.....	18
4.6	PLASTIC PALLETS	19
4.7	CALCIUM HYPOCHLORITE STORAGE & PROTECTION.....	20
4.8	IBC CONTAINERS	21
4.9	PLASTIC ENCLOSURE FLAMMABILITY TESTING.....	22

5.0	UL STANDARDS, DIRECTORIES, AND SERVICES	23
5.1	HARMONIZATION OF U.S. & CANADIAN STANDARDS.....	23
5.2	CANENA PROJECTS.....	24
5.3	STANDARDS IN OTHER LANGUAGES.....	25
5.4	DURABILITY AND FORMAT OF WARNING LABELS.....	26
5.5	CONTINUOUS MAINTENANCE METHOD OF STANDARDS DEVELOPMENT.....	27
5.6	UL COUNCIL MAILING PROCEDURES.....	28
5.7	PRINT DIRECTORY REORGANIZATION, CHANGES TO ONLINE INFORMATION, AND MARKING GUIDES.....	29
5.8	PHOTOLUMINESCENT EXIT SIGNS.....	30
5.9	KEROSENE HEATERS.....	31
6.0	NEW DEVELOPMENTS	32
6.1	PHOENIX EMERGENCY RESPONSE TEAM.....	32
6.2	MAJOR RESEARCH PROGRAMS PLANNED AT UL.....	33
6.3	UL 2200 EMERGENCY GENERATOR ACTIVITIES.....	34
6.4	FUEL CELLS.....	35
6.5	APPLIANCE RATINGS.....	36
6.6	AGED ELECTRICAL WIRING SYSTEMS.....	37