



# Lamothe Approvals Inc.

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## Design Considerations for IEC 60950-1: Safety Requirements for Information Technology Equipment

### 2 Day Seminar

#### Day 1:

9:00-10:30 – Introduction to IEC 60950-1. Topics discussed include the following:

- Differences between CSA C22.2 No. 60950-1, UL 60950-1, IEC 60950-1 and EN 60950-1.
- Scope of IEC 60950-1.
- Overview of IEC 60950-1's general requirements.
- Defining key terms used in IEC 60950-1.

10:45-12:00 – Protection Methods used in IEC 60950-1. Topics include the following:

- SELV circuits.
- Limited current and Limited power circuits.
- Interlocks.
- Overcurrent and earth fault protection.
- Electrical insulation.

13:00-14:30 – Basic requirements of insulation. Topics include the following:

- The importance of a block diagram.
- Defining various types of insulation and where each is used.
- Defining working voltage, creepage distance and clearances.
- How Pollution degree, Overvoltage Category, CTI values and Working Voltage affect Creepage Distance and Clearances.

14:45-16:00 – Testing for IEC 60950-1. Topics include the following:

- Single fault tests.
- Temperature testing and requirements.
- Mechanical tests.
- Touch current.

#### Day 2:

9:00-10:30 – Telecommunication network and cable distribution system requirements. Topics include the following:

- Defining TNV circuits.
- Tests conducted on TNV circuits.
- Additional North American requirements for TNV circuits.
- Cable distribution system requirements.

10:45-12:00 – Selecting components and earthing according to IEC 60950-1. Topics include the following:

- Certifications and requirements for components.
- Component selection tips and resources.
- Earthing and bonding requirements.

13:00-14:30 – Requirements to avoid the spread of fire. Topics include:

- Fire enclosure requirements.
- Flame ratings (i.e. 94V-0, V-1, V-2) and what is required.

14:45-16:00 – Question Period.