Technical Council on Lifeline Earthquake Engineering (TCLEE)

by

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for

GEER Joint Advisory Panel and Working Group Meeting

October 7 & 8, 2004

Goals of TCLEE

Elevate the state-of-the-art and practice of lifeline earthquake engineering through:

- Development of guidelines and pre-standards
- Encourage utilities, associated manufacturers, and professional to consider earthquakes and the impact on planning, design, and operation of their systems
- Serve as a primary resource for establishing a broad consensus on lifeline seismic issues
- Identify and prioritize research needs related to lifeline seismic planning, design, construction, and operation
- Support and conduct programs for education and technology transfer on lifeline seismic issues
- Extend the understanding of how earthquakes affect lifelines and their facilities

Structure of TCLEE Technical Committees

- Earthquake Investigations
- Electric Power and Communications
- Gas and Liquid Fuels
- Ports
- Seismic Risk
- Transportation
- Water and Wastewater

Publications - Guidelines

- Guidelines for the Seismic Design of Oil and Gas Pipeline Systems
- Guide to Post-earthquake Investigation of Lifelines
- Guide to Improved Earthquake Performance of Electric Power Systems
- Seismic Design for Natural Gas Distributors
- Methods of Achieving Improved Seismic Performance of Communications Systems
- Guidelines for the Seismic Evaluation and Upgrade of Water Transmission Facilities
- Seismic Guide to Ports

Publications - National Meetings

Six Proceedings

Publications - Earthquake Investigations

Early reports are included in EERI reports
Later, large reports are published as part of ASCE monograph series (Total of about 30 reports)

Publications - Other Reports and Investigations

Earthquake Investigations Committee and Investigations

- Publication of Investigation guide
  - Training - Within the specialty
  - Training - Multi-disciplinary
- Access - secured facilities, liability-injury, liability-corporate
- Report preparation
- Geotechnical Issues
- Future publications and dissemination of EQ investigation reports

Guide to Post-Earthquake Investigations of Lifelines

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Training Sites Visited

(Partial Listing)

Moss Landing PP and switchyard
LAX control tower
LAX emergency response center
Railroad Bridges Memphis
Light rail control center
Delta Salinity control gate
Natural Gas Liquefaction plant
OES building in Oakland
Pacific Bell Building Oakland
Memphis L&G control/SCADA
Port of LA
Alameda Corridor
Memphis Substation
PG&E Substation (Tesla)
OES EOC in Sacramento
Bonneville Dam
San Onofre NGS
I 805- bridge retrofit
Liquid Fuel Pumping Station
Portland Sewage Treatment plan