

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



October 15, 2008

David Folce
Electric Operation Manager
Lassen Municipal Utility District
65 S. Roop Street
Susanville, CA 96130

CPUC File No. E200823

SUBJECT: Electric Audit of Lassen Municipal Utility District (LMUD)

On behalf of the Utilities Safety and Reliability Branch (USRB) of the California Public Utilities Commission, Aimee Dalusong and I conducted an Electric Audit of Lassen Municipal Utility District from September 24-26, 2008. The audit included a review of your records for the period of 2007-2008.

During the inspection, we identified violations of one or more General Orders. A copy of the audit summary itemizing the violations is enclosed. Within 30 days, please advise me by electronic or hard copy of all the corrective measures taken by the Utility regarding the violation(s) and the date on which they were corrected.

If you have any questions, please contact me at (415) 703-2192.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jadwindar Singh".

Jadwindar Singh, P.E.
Utilities Engineer
Utilities Safety and Reliability Branch
Consumer Protection and Safety Division

Enclosure: Audit Summary

CC: Aimee Dalusong, CPSD

Audit Summary

Violations

**(1) General Order 165 – Inspection Cycles for Electric Distribution Facilities
IV. Standards for Inspection, Record-keeping, and Reporting
Appendix A, Electric Company System Inspection Cycles (Maximum Interval in Years)**

Section IV, states in part:

Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to assure reliable, high quality, and safe operations, but in no case may the period between inspections (measured in years) exceed the time specified in the attached table.

a) Patrols and Detailed Inspections

LMUD does not have a written inspection program to ensure compliance with the patrol and inspection intervals of General Order 165, Appendix A. Although the utility does perform patrols of its line during normal business work, as well as full detailed inspections of lines within areas of heavy vegetation, these patrols and inspections do not meet the full requirement of General Order 165 as they do not guarantee that all circuits have been patrolled or inspected. LMUD must implement a written General Order 165 program that specifies inspection intervals for all utility lines, documentation procedures for those inspections, and the scheduled date of correction for any noncompliances found.

b) Intrusive Inspection of Wood Poles

LMUD does not have a written inspection program to ensure compliance with the intrusive inspection of wood poles intervals of General Order 165, Appendix A. LMUD stated that some of the poles in its territory have been intrusively inspected. However, LMUD does not have a program that meets the intrusive inspection of wood pole criteria set forth in the table.

**(2) General Order 165 – Inspection Cycles for Electric Distribution Facilities
IV. Standards for Inspection, Record-keeping, and Reporting
Appendix A, Electric Company System Inspection Cycles (Maximum Interval in Years)**

Section IV, states in part:

For all inspections, within a reasonable period, company records shall specify the circuit, area, or equipment inspected, the name of the inspector, the date of the inspection, and any problems identified during each inspection, as well as the scheduled date of corrective action. For detailed and intrusive inspections, companies shall also rate the condition of inspected equipment. Upon completion of corrective action, company records will show the nature of the work, the date, and the identity of persons performing the work. (emphasis added).

Distribution Equipment Inspections

LMUD does not have a written inspection program to ensure compliance with the equipment inspection intervals of General Order 165, Appendix A (outside of substations). LMUD must implement a written General Order 165 program that specifies inspection intervals for all utility distribution equipment; documentation procedures for those inspections, and the scheduled date of correction for any noncompliances found.

(3) **General Order 95, Rule 31.6 Abandoned Lines**

Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use.

During our audit, we found abandoned grounds at the following locations:

- a) Pole 168 across from Janesville Union School
- b) Pole 167 across from Janesville Union School

(4) **General Order 95, Rule 37 Minimum Clearances of Wires above Railroads, Thoroughfares, Buildings, Etc.**

Table 1, Case 6a - Vertical clearance above non-walkable surfaces on buildings, (except generating plants or substations) bridges or other structures, which do not ordinarily support conductors, whether attached or unattached, Column D, Exception (zz)

(zz) May be reduced to 2 feet for conductors insulated in accordance with - Rule 20.9-G

During our audit, we found the service to 1416 Spruce St., Susanville (coming from Pole 33) to be less than 2 feet above the roof of the garage.

(5) **General Order 95, Rule 37 Minimum Clearances of Wires above Railroads, Thoroughfares, Buildings, Etc.**

Table 1, Case 13 - Radial clearance of bare line conductors from tree branches or foliage, Column E

18 inches

During our audit, we found primary conductors at the following locations encroaching up on the 18 inch limit:

- a) Pole 3393 – East of Switch B095
- b) One pole west of Pole 3393

(6) **General Order 95, Rule 51.6-A High Voltage Marking of Poles**

Poles which support line conductors of more than 750 volts shall be marked with high voltage signs. This marking shall consist of a single sign showing the words "HIGH

VOLTAGE", or pair of signs showing the words "HIGH" and "VOLTAGE", not more than six (6) inches in height with letters not less than 3 inches in height. A pair of signs may be stacked to a height of no more than 12 inches. Such signs shall be of weather and corrosion-resisting material, solid or with letters cut out therefrom and clearly legible.

During our audit, we identified locations where "High Voltage" signs were missing. The following poles had missing "High Voltage" signs:

- a) Pole 32 – 1 pole South of the alley behind North & Spruce
- b) Pole 31
- c) Pole 37
- d) Pole 38
- e) Pole in front of Janesville Union School

(7) General Order 95, Rule 54.6-B Ground Wires

That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering (see Rule 22.8).

During our field audit, we identified locations that had exposed grounds. The following poles had exposed grounds:

- a) Pole 32 at communication level – 1 pole South of the alley behind North & Spruce
- b) Pole 38

(8) General Order 95, Rule 58.1 Enclosed Equipment (Transformers, Capacitors, Regulators, etc.)

B. Case and Lead Wire Clearances

(3) From Hardware: Equipment cases, hangers, and other metal parts in contact therewith shall clear through bolts, arm braces of metal, and other hardware elements, by not less than 1.5 inches; except that such cases and hangers shall clear crossarm braces and crossarm through bolts by not less than 1 inch air-gap distance and 1.5 inch creepage distance.

The minimum clearance of 1.5 inches need not apply to through bolts in metallic contact with equipment cases or metal parts thereof nor to through bolts supporting heel arms, provided the portion of such through bolts extending into the climbing space is covered with non-conducting material as specified in Rule 22.8.

During our audit, we identified locations where transformer through bolts were missing a non-conducting covering. The following poles had missing bolt covers:

- a) Pole 32 – 1 pole South of the alley behind North & Spruce
- b) Pole 38
- c) T-40
- d) T-597

(9) General Order 128, Rule 12.2 Maintenance

Systems shall be maintained in such condition as to secure safety to workmen and the public in general.

a) Secondary Termination Brick

The secondary termination brick at PD233 is 8-way and is too long to fit safely inside the pad mounted transformer. Its length is a hazard to the public and workers because the termination brick has the potential to make contact with the transformer case.

b) Barrier Posts

We also found that barrier posts are either missing or need to be repaired at the following locations:

- I. Parking lot of the Indian Casino
- II. PD156 needs barrier posts because customers use the area adjacent to the transformer as a driveway to their backyard.
- III. The barrier posts around the pad mounted transformer and subsurface vault behind Janesville Union School need replacing.

(10) General Order 128, Rule 34.3 Self-contained Surface-mounted Equipment

A. Strength

The equipment case or enclosure shall be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.

During our audit, we found that the following pad mounted transformers were not secured in place:

- a) Indian Casino
- b) PD209
- c) PD207
- d) PD223
- e) PD233
- f) PD232
- g) PD156
- h) Padmount in front of Janesville Union School
- i) Padmount in rear of Janesville Union School

(11) General Order 128, Rule 34.3 Self-contained Surface-mounted Equipment

B. Guarding Live Parts

Compartments and enclosures which will, during normal operation, contain exposed live parts shall be designed and installed to prevent a person from passing a wire or other conducting material into such compartment from the outside when it is closed. This requirement is not intended to prevent normal work operations such as fishing ducts and

installing cable.

EXCEPTION:

Pad-mounted equipment that contains exposed live parts shall be installed to resist the passing of a wire the equivalent of a bare number 18 AWG from the outside between the pad and the housing of the equipment, into the compartment which contains live parts when it is closed.

Pad Mounted Transformer 223 has a gap at the bottom left corner of the primary compartment that would allow the passing of an 18 AWG wire into the compartment.

(12) General Order 128, Rule 34.3 Self-contained Surface-mounted Equipment

C. Locking

Compartments and enclosures shall be made secure against entry by unauthorized persons by means of locks or other suitable means.

During our audit, we found that the following pad mounted transformers did not have penta bolts:

- a) PD222
- b) PD234

(13) General Order 128, Rule 35.3 Warning Signs

Warning signs indicating high voltage shall be installed on an interior surface, or barrier if present, inside the entrance of vaults, manholes, handholes, pad mounted transformer compartments, and other above ground enclosures containing exposed live parts above 750 volts. Such warning signs shall also be installed on an exterior surface of all such pad mounted transformer compartments and other above ground enclosures. Such signs shall be clearly visible to a person in position to open any such access door, other opening, or barrier.

The pad mounted transformer in the front of Janesville Union School did not have any warning signs on the exterior surface. There were also not any ownership decals.