

CALIFORNIA PUBLIC UTILITIES COMMISSION
Safety and Enforcement Division
Electric Safety and Reliability Branch

Incident Investigation Report

Report Date: 1/19/2018

Investigator: James Miller

Incident Number: E 20171202-01

Utility: Southern California Edison (SCE)

Date and Time of the Incident: 12/02/2017, 1:40 PM

Location of the Incident: 750 Clyde River Place
Oxnard, CA
County: Ventura

Summary of Incident:

An employee of Light and Power, Inc., an independent third-party contractor, was injured when he cut into an energized 16 kV underground conductor at a construction site. My investigation revealed that SCE installed the underground conductor in an active excavation site after the construction company responsible for excavation had acquired a valid DigAlert ticket and did not inform that construction company of the new conductor. Furthermore, SCE also did not inform its own contractor responsible for marking and locating SCE's underground facilities, UtiliQuest, of the new conductor at the time of installation. SCE also did not locate and mark the 16 kV underground conductor.

Fatality / Injury: There was 1 injury reported.

Property Damage: None

Utility Facilities involved: Maulhardt, 16 kV Circuit

Witnesses:

<i>Name</i>	<i>Title</i>	<i>Phone</i>
1. James Miller	CPUC Investigator	(213) 266-4715
2. [REDACTED]	SCE Investigator	[REDACTED]
3. [REDACTED]	SCE Senior Manager	[REDACTED]

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| 4. ██████████ | McCarthy Company Sup. | ██████████ |
| 5. Lorenzo Zwaal | CalOSHA Safety Assoc. | (818) 901-5403 |

Evidence:

<i>Source</i>	<i>Description</i>
1.SCE	Initial Report
2.SCE	Final Reports
3.SCE	Data Request Responses
4.CPUC	Site Visit Pictures
5.USA	DigAlert Tickets

Observations and Findings:

On November 8, 2017, Baja Construction obtained a DigAlert ticket from Underground Service Alert (USA) that was valid through December 6, 2017 as a part of a carport construction project related to a senior living apartment building. McCarthy Companies was the general contractor for the project at large and Baja Construction was the sub-contractor responsible for building the carports. Baja Construction’s work included boring into the ground and installing columns to support the roof of the carport at 750 Clyde River Place.

SCE has contracted UtiliQuest to mark SCE’s underground facilities. UtiliQuest is a provider of damage prevention and infrastructure related services specializing in underground facility location. They service the telecommunications, gas, and electric industries. USA directly contacts UtiliQuest and other agencies via email when someone requests help locating underground installations, including SCE’s underground facilities.

On November 10, 2017, UtiliQuest responded to USA’s notification by dispatching personnel to 750 Clyde River Place to survey the site and mark on the ground any of SCE’s underground utilities that may have been present. UtiliQuest correctly determined that the excavation site did not contain any underground electrical facilities.

Baja Construction was scheduled to start construction of the carports shortly after obtaining the DigAlert ticket on November 8, 2017, but construction was delayed due to unknown reasons. On November 28, 2017, and prior to Baja Construction commencing its scoped work, SCE installed and energized an underground 16 kV conductor at 750 Clyde River Place. However, neither SCE nor McCarthy Companies informed Baja Construction or UtiliQuest of the new underground installation.

On December 2, 2017, with the valid USA ticket that was issued on November 8, 2017, and valid until December 6, 2017, Baja Construction commenced work on the carport’s construction. The Baja Construction crew was boring into the ground using a skid-steer with an auger when the crew exposed an underground conductor. The Baja Construction crew members informed the staff of Light & Power, Inc., an electrical contractor working for McCarthy Companies on the project, of its discovery. A foreman electrician for Light & Power, Inc., examined the exposed conductor, and despite the new transformer nearby, this electrician concluded that the conductor had been abandoned, and that it was probably not energized. He used a hand-held cable cutter to cut into the exposed conductor, which

created an electrical flash causing [REDACTED] injuries to the electrician. The electrician's co-workers took him to [REDACTED] for treatment, and he was later transported to [REDACTED] where he was admitted for further treatment.

Later, on December 4, Baja Construction staff called USA again to renew their DigAlert ticket for the worksite, as their excavation activities were incomplete at the time. UtiliQuest staff arrived at the incident site later that day and marked the location of the newly installed conductor with red paint, using the visible trenching from the conductor's installation as a guide. The new ticket would be valid until January 1, 2018.

SED's investigation revealed that the subject underground conductor that Baja Construction exposed and the electrician cut was the 16 kV conductor that SCE installed on November 28, 2017, (after the USA ticket was issued). SED also learned that SCE's policy is to inform UtiliQuest of new underground installations only once a month when SCE updates its facility maps and shares them with UtiliQuest via a compact disc¹. It is not SCE's policy to inform UtiliQuest of newly-installed underground conductors at the time of installation, but to only inform UtiliQuest of the new installations during the monthly map update. SCE follows this policy even if the new conductor is installed in an active excavation site with a valid DigAlert ticket. This practice is dangerous, because it forces UtiliQuest to work with incomplete and inaccurate information when it comes to newly installed conductors in active excavation areas. This practice can cause UtiliQuest to fail to locate new conductors in active excavation sites that they are not aware of and are not yet on their maps. Furthermore, if SCE had informed UtiliQuest or Baja Construction of the new conductor, UtiliQuest could have located and marked the underground conductor before the start of excavation and this accident and the injuries to the electrician could have been avoided.

General Order (GO) 128, Rule 17.1 Design, Construction and Maintenance, states:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of [the] communication or supply lines and equipment.

All work performed on public streets and highways shall be done in such a manner that the operations of other utilities and the convenience of the public will be interfered with as little as possible and no conditions unusually dangerous to workmen, pedestrians or others shall be established at any time.

GO 128, Rule 17.1, requires utilities to operate and maintain their facilities in a safe manner that would enable a safe environment to the public, utility employees, and its contractors. SCE's practice of sharing

¹ In a May 4, 2020 response from SCE to SED's data request dated April 3, 2020, SCE stated that even in a case such as this, in which SCE had installed a new underground conductor in an active excavation site, SCE would only inform UtiliQuest of the new conductor at the monthly map update.

their updated underground facility maps with their contractor UtiliQuest on a monthly basis can create a dangerous situation for workers in active excavation areas. UtiliQuest is likely to fail to locate and mark the location of conductors that have been installed since the last update they received when new underground conductors are installed after UtiliQuest has visited the area of excavation and already identified and marked, when appropriate, the location of existing underground conductors.

This practice is especially hazardous in situations such as this one, in which SCE installed a new conductor in an active excavation site with a valid DigAlert ticket in effect. Should SCE fail to mark the location of the new conductor, as they did in this case, UtiliQuest will have no reason to return to the excavation site to re-mark the area after new conductor has been installed. This potential hazard could be mitigated if SCE informed UtiliQuest of the new installation immediately at the time of installation. By installing underground facilities in an area of active excavation without marking the location of the new conductor, nor informing the excavator, nor the locator (UtiliQuest) of the existence of energized underground conductors, SCE created a dangerous condition that resulted in the injury of the electrician. Therefore, SCE is in violation of GO 128, Rule 17.1, for implementing a policy that creates dangerous conditions and prevents the furnishing of a safe environment for workers.

California Government Code § 4216.3(a)(1)(B) states:

An operator shall mark newly installed subsurface installations in areas with continuing excavation activity.

California Government Code § 4216.3(a)(1)(B) requires operators, such as utility companies, to mark newly installed subsurface installations, such as underground conductors, if they are installed in areas with continuing excavation activity. SCE installed the new 16 kV underground conductor at 750 Clyde River Place while a DigAlert ticket was active and excavation activities were ongoing in the area, however, SCE did not mark the location of that subsurface conductor after installing it. By not following Section 4216.3(a)(1)(B), SCE did not conduct work in accordance with accepted good practice, thus, violating GO 128, Rule 17.1.

General Order 128, Rule 17.7, Location Information, states:

Each party operating or owning facilities shall, upon request, provide information as to location of its underground facilities to any other party contemplating underground construction, or work, in the vicinity thereof. Provision of such information by a party will not relieve such other party of his responsibility to locate accurately such underground facilities and to exercise reasonable care during construction or work. If at any time damage or interruption to existing facilities should occur, said other party is enjoined immediately to report such damage to the party owning such damaged or interrupted facilities.

GO 128, Rule 17.7, requires each party operating or owning facilities to, upon request, provide information as to the location of its underground facilities to any other party contemplating underground construction, or work, in the vicinity thereof. Baja Construction had a valid USA DigAlert ticket prior to commencing work, thus requiring SCE to provide information about their underground facilities. However, SCE failed to mark the newly installed conductor and did not provide that information to UtiliQuest nor directly to Baja Construction. SCE failed to ensure that its underground facilities were marked properly prior to excavation as requested.

California Public Utilities Code (PU Code) § 451, states in part:

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.

SCE installed a new 16 kV underground conductor in an active excavation area without marking the conductor, without informing the excavator Baja Construction who had a valid DigAlert ticket, and without informing SCE's locator UtiliQuest who is responsible to locate and mark SCE's underground facilities. Therefore, SCE is in violation of PU Code § 451 for not maintaining its facilities as necessary to promote the safety of the public and employees.

Preliminary Statement of Pertinent General Order, Public Utilities Code Requirements, and/or Federal Requirements:

<i>Code</i>	<i>Rule</i>
1. GO 128	17.1
2. GO 128	17.7
3. California Code	4216.3
4. PU Code	451

Conclusion:

My investigation concluded that SCE violated the following:

1. GO128, Rule 17.1, for creating unusually dangerous conditions to workmen by not informing its contractor UtiliQuest of new underground installations in an active excavation area with a valid DigAlert ticket.
2. GO 128, Rule 17.1, by not complying with California Government Code § 4216.3, which requires SCE to mark the location of new underground conductors after installing them in an active excavation area.
3. GO128, Rule 17.7, by failing to locate and mark its underground facilities properly in an area with a valid DigAlert ticket, and failing to inform Baja Construction of the new installation after the company had requested and acquired a valid DigAlert ticket that included a request to locate all underground electrical facilities at that excavation site.
4. PU Code § 451, for not maintaining its facilities as necessary to promote the safety of the public and employees - when SCE failed to inform appropriate representatives of the newly installed 16 kV underground conductor.