



Join Us... June 10, 2014

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Date	Location
Tuesday, June 10th	Zio Fraedo's Restaurant 611 Gregory Lane, Pleasant Hill, CA. (925) 933-9091
Time: No Host Bar 5:30 pm • Dinner 6:30 pm • Program 7:15 pm	
Cost: \$15 NACE members, NACE retirees and students	
\$25 non-members	

Please RSVP by Thursday, June 5th by email to Michelle Anderson at mlanderson@corrpro.com, or by phone at (510) 381-1414.

To insure affordable gatherings, please plan to pay the dinner fee when you attend the no-host bar portion of our program.

Cancellation deadline is Friday, June 6th. No shows will be billed!

Meeting Location / Directions: Please see attachment

Mitigation of Arcing Risks to Pipelines Due to Phase-to-Ground Faults at Adjacent Transmission Powerline Structures

Bryon Winget, M.S., P.E.

Supervisor of Corrosion Engineering, Pacific Gas & Electric Company

Although the probability of a phase to ground fault occurring at a specific transmission powerline tower and resulting in an arc to an adjacent pipeline may be quite small, the risk cannot be ignored due to the severity of the potential consequences. A sustained arc to a pipeline could result in melting of the pipe wall and catastrophic failure of the pipeline. Additionally, the powerline fault current would be transferred directly to the pipeline via the arc, resulting in safety risks, the potential for additional arcing risks at crossings with foreign structures, and a risk of damage to isolating flanges and to cathodic protection equipment upstream and downstream of the fault location. In order to ensure there is no risk of arcing, a critical or "safe" separation distance between the pipeline and any part of the powerline tower foundation or grounding system must be maintained.

This paper discusses how to determine the critical separation distance that is required to avoid an arc based on research, literature and standards, and explores mitigation options in circumstances where this distance cannot be feasibly maintained. Calculations and mitigation measures from a case study and a pilot site will be presented.

Bryon Winget, M.S., P.E. Bryon Winget, P.E. is the supervisor of corrosion engineering at Pacific Gas and Electric (PG&E). Bryon attained Bachelor's and Masters of Science degrees in Materials Science and Engineering from U.C. Berkeley and holds a professional engineer's license in Mechanical Engineering. Prior to his work at PG&E, Bryon conducted research at U.C. Berkeley on enhancing the adsorption rates of inhibitors on Conoco Phillips Prudhoe Bay feeder lines by manipulating oxide and hydroxide formations. At PG&E, Bryon has played a critical role in developing and enhancing the corrosion control program to ensure a safe and reliable pipeline system. As part of this role, he has led the effort to develop a better understanding of alternating current (AC) interference— especially relevant due to the shared right-of-ways, direct current (DC) interference, casings, internal corrosion, and atmospheric corrosion at PG&E. He has several years of field and engineering experience in corrosion which has enabled him to become a NACE certified cathodic protection specialist.



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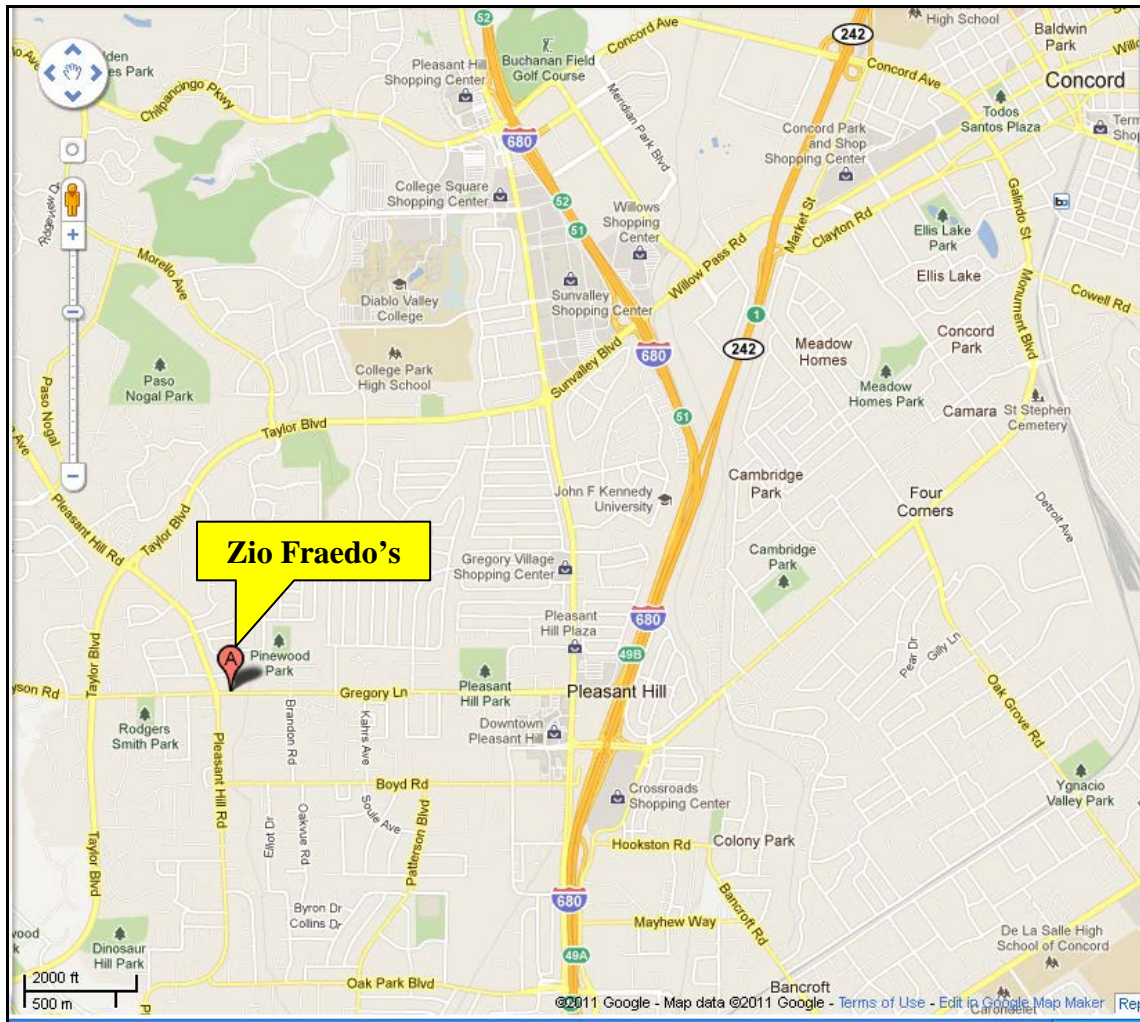


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Zio Fraedo's Restaurant, 611 Gregory Lane, Pleasant Hill, CA. 925-933-9091

Directions

- Take I-680 north to Contra Costa Blvd. Exit 49A in Pleasant Hill and drive north. Pass Monument Blvd. then turn left onto Gregory Lane. Pass Brandon Rd. on left in 1 mile. Look for Zio Fraedo's on the right just before Pleasant Hill Rd.
- Take I-680 south, exit at Sun Valley/Willow Pass Rd. Drive west and turn left on Contra Costa Blvd., then right on Gregory Lane. After 1 mile drive past Brandon Rd. on the left; Zio Fraedo's will be on the right before Pleasant Hill Rd. intersection.