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PACIFIC GAS AND ELECTRIC COMPANY

PG&E — 245 MARKET STREET • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211 • TWX 910-372-6587

January 18, 1977

Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P. O. Box 4790
Walnut Creek, California 94596

Attention: Mr. L. L. Mitchell, Business Manager

Gentlemen:

This letter cancels and supersedes our letter to you dated February 12, 1976, on the same subject.

Company proposes to amend the letter agreement dated June 25, 1972, concerning the training program of Corrosion Mechanics as follows:

B. CORROSION MECHANIC TRAINING SCHOOL

1. Appointment

Employees who have successfully met the entrance requirements set forth above will be eligible for appointment to the Corrosion Mechanic Training School. Enrollments in the School will be made by Company from among those eligible candidates who are most likely to receive appointment to the next following Corrosion Mechanic vacancy.

In addition to the foregoing, Company will select candidates to attend the Corrosion Mechanic Training School on the basis of ability and personal qualifications in accordance with the principles outlined in Section 205.11 of the Agreement.

Training material consisting of a Corrosion Control Manual and a text "Basic Mathematics," will be issued to each trainee prior to attending class. Each trainee will be required to complete the nine problems in the training material before the first day of attendance at the classroom.

This amendment is sought in response to Fact Finding Committee Memorandum of Disposition - Case No. 96-75-60. A copy of the material is attached.

If you are in accord with the foregoing and its attachments and agree thereto, please so indicate in the space provided below and return one executed copy of this letter to Company.

Yours very truly,

PACIFIC GAS AND ELECTRIC COMPANY

By J. W. Bolwright
Manager of Industrial Relations

The Union is in accord with the foregoing and its attachments and it agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO

July 8 , 1977

By L. L. Mitchell

EAST BAY DIVISION

FACT FINDING COMMITTEE MEMORANDUM OF DISPOSITION - CASE NO. 96-75-60

LOCAL INVESTIGATING COMMITTEE CASE NO. 1-75-24

On June 13, 1975, the Fact Finding Committee, comprised of Messrs. L. N. Foss, Assistant Business Manager, Local Union 1245, I.B.E.W.; V. Stamps, Union Business Representative; D. J. Bergman, Industrial Relations Representative; and P. E. Pettigrew, Labor Relations Representative, met to discuss this grievance. The Committee reviewed the Joint Statement of Facts and determined that it was accurate.

After careful review of the issues in this case, the Fact Finding Committee agreed that the math problems in question, in this case, were used as a prerequisite for attending Corrosion Mechanic School. This was outside of the Agreement between Company and Union of June 25, 1972, which established the requirements for attendance at Corrosion Mechanic School. The Committee felt that regardless of the merits of the math problems as a prerequisite, the proper way to include them in the Corrosion Mechanic program would be by negotiations between the Industrial Relations Department and the Union.

The Committee agreed that the use of this "test" by the Company on a unilateral basis was improper.

This case is settled on that basis.

FOR COMPANY

D. J. Bergman Concur/~~Dissent~~

7-23-75 Date

Paul E. Pettigrew Concur/~~Dissent~~

7/25/75 Date

FOR UNION

Lawrence N. Foss Concur/~~Dissent~~

7-23-75 Date

Vlado Stamps Concur/~~Dissent~~

8-5-75 Date

APPENDIX

I. Student understanding of corrosion terminology will be evaluated in three closed book written examinations (10 points each). The terms to be explained by the student may be found in the glossary section.* The glossary explanations must be supplemented with information from Chapters 2 to 9. The daily tests will consist of from five to ten questions that require one word to one paragraph answers.

II. Students will be evaluated on their proficiency using the Miller B-3 potentiometer voltmeter, the Simpson type VOM and the vibroground instrument. Complete training in the use of these instruments is given at the school; however, it is to the student's advantage to be exposed to these instruments before they attend the school. The use of the pipe locators (Tinker and Metrotech types) are not covered at the school and therefore must be stressed during post school field training.

III. The remainder of the one week school is devoted to corrosion control problem solving and is evaluated in an open book examination. Examples of typical problems follow.

A. What is the weight loss in pounds per year for iron and for carbon if 3 amps of current is discharged continously? See page 3-6*

Iron?

Carbon?

B. If steel, copper and carbon are connected together and buried, which material will not corrode? See page 4-2*

*Company Corrosion Control Manual

C. Indicate the current output in amps for:

1. Five 33 pound zinc anodes in 1100 ohm centimeter soil? See Page 6-11 (Anode spacing 15')*
2. One 35 pound magnesium anode in 1100 ohm centimeter soil?
3. What is the expected life for each of the above?

D. What is the single anode resistance for a 3" x 60" graphite anode installed in: (1000 ohm - centimeter soil resistivity)

1. A 12" x 7' hole with coke breeze backfill? See Page 6-16*
2. A 16" x 7' hole with coke breeze backfill?
3. Installed without coke breeze backfill?

E. What is the combined anode ground bed resistance for three 7 foot by 12 inch graphite anodes installed in 16,800 ohm cm. soil? See Page 6-19 (Anode spacing 15')*

If in the previous example 2.5 amps of current is needed, what voltage is necessary?

F.

1. What is the square foot surface area for 1000 feet of 6 inch gas main? See page 7-7*
2. What is the "K" factor for the above pipe if it has a .1875" wall thickness?
3. What is the calculated current flow if a voltage drop of 5 millivolts is measured on 300 feet of this 6 inch main? See page 7-6 to 7-8*

G.

1. What is the current flow in amps on a 5 amp 50 millivolt shunt if 3 mv is measured? See page 7-13*
2. What is the current flow on a 2 ohm resistor if a voltage drop of 500 millivolts is measured?
3. What is the voltage drop on 500 feet of number ten wire if one foot has a resistance of .001 ohm and 2 amps is flowing?

H.

1. If .05 MA/sq. ft. is the expected current requirement for 51,500 square feet of main, what is the current in amps needed to protect this main? See Page 6-5 and 6-6*
2. Now use .03 MA/sq. ft. in the previous problem. What is the current required to protect the main?
3. Which of the previous examples has the poorest main coating?

1. The following values of resistance in ohms are obtained from a vibroground and wire harness combination.

2.5'	4.4 ohms	_____
5.0'	2.8 ohms	_____
7.5'	2.5 ohms	_____
10.0'	1.9 ohms	_____
15.0'	1.4 ohms	_____

What is the calculated soil resistivity for each depth and the average resistivity for this soil? See Page 7-44 to 47*

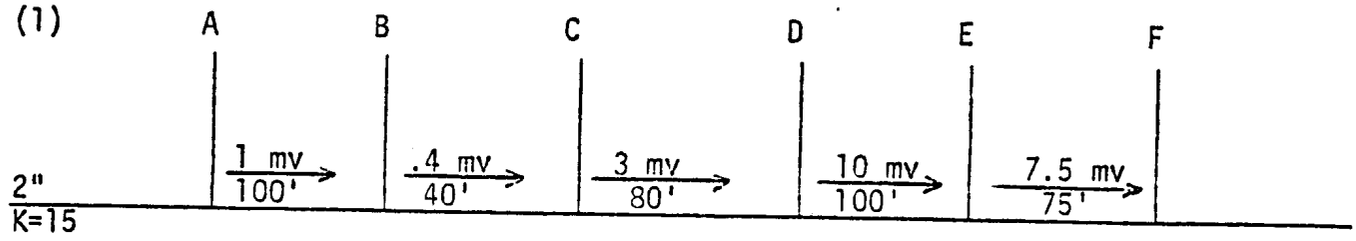
J.

1. Using the three point method, a vibroground reading of 12.4 ohms is observed. Is this a measure of soil resistivity? See Page 7-48* and 49.
2. What might the value of 12.4 ohms in the previous example be used for?
3. If the structure in the previous example is 120 feet, what is the minimum spacing between pins (P_1 and P_2) and (C_1 and C_2)?

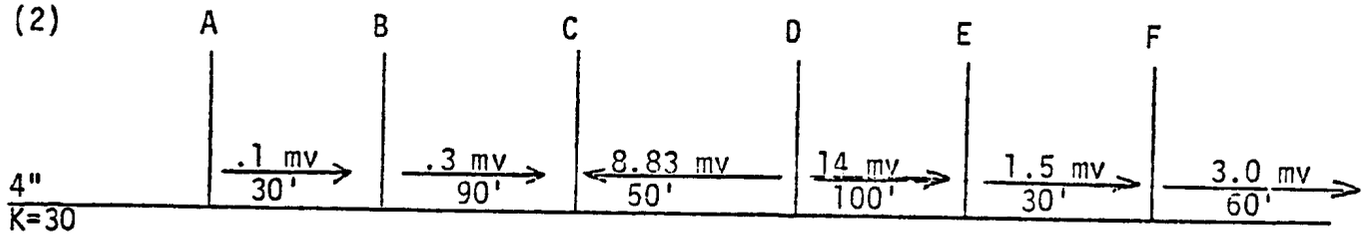
K. Given the following problems calculate the location of the underground contact (see insert after Page 7-16)*

All services are 3/4" K=4.6

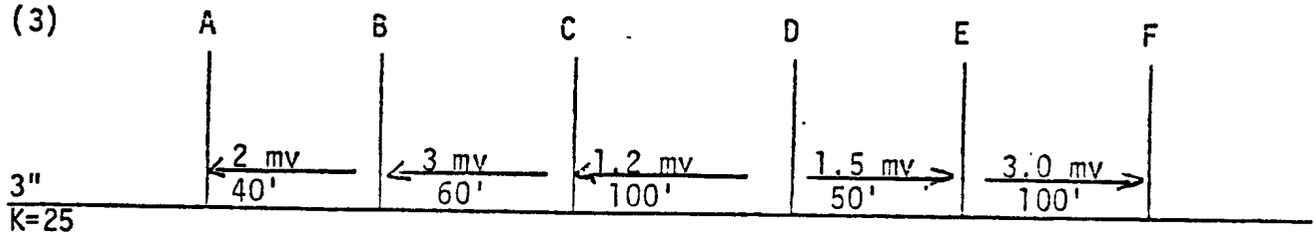
(1)



(2)



(3)



IV. Math Problems

Before attending the corrosion mechanics school, ability to solve all of the following math problems is expected of each student. These problems are to be completed and turned in the first day of class. Employees failing to have this work, will be asked to return to their divisions.

Show all work!

1. $(32)\ (8.1) = 6.8x$ $\qquad x =$

2. $\frac{10.4}{9.7} = I$ $\qquad I =$

3. $\frac{7.1 + 8.4}{4} = B$ $\qquad B =$

4. $\frac{7.1 \times 8.4}{3} = K$ $\qquad K =$

5. $R = \frac{7000}{1000} \times 2.3 \times \frac{1.25}{6}$ $\qquad R =$

6. $I = 15 \times \frac{8.2}{100}$ $I =$

7. $I = 1.3 + .52 - .22 - .38$ $I =$

8. $D = \frac{15\ (2.7)}{1.9}$ $D =$

9. $\frac{1.5 \times D_B}{15} - \frac{.8\ (110 - D_B)}{15} = 1.45$ $D_B =$