UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

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DIVISION OF IRRIGATION
DAVIS, CALIFORNIA

August 11, 1953

Mr. Les Stromberg
Farm Advisor
Room 20, U. S. Post Office
Fresno 1, California

Dear Les:

Thought you would appreciate at least one more letter added to the pile that will no doubt greet you on your return from vacation.

I have tabulated up all the available data on the 12 wells and a copy is enclosed. Several things appear rather obvious.

1. The weight loss of the first set of test strips indicate considerable range of loss. From the standpoint of relative values it appears that the selection of these wells were good. However it remains to be seen if these values can be correlated with actual corrosion rates within the well and pump.

2. There appears to be no correlation between the weight loss and the mineral constituents of the water which include the usual ones and the heavy metals. The only exceptions are Pappas No. 5 and Hague No. 9 where increases in chloride concentrations are noted. These were the highest in weight loss, yet Calflax No. 5a had a very high loss but low chlorides.

3. There is considerable variation in the field and laboratory pH readings. The measurements taken on July 1 indicate low pH in several of the highest weight loss wells. These low pH values were substantiated roughly by checks with pH paper. However, there are inconsistancies there too, particularly in the case of Pappas No. 5 and Calflax No. 5a.

The lab measurements of those first samples show higher pH, which is to be expected to a small degree, except in one case, Calflax 5a, where a much lower pH was measured.

The readings you took on July 29th were all above 7.0 and in some cases higher than the previous lab tests. This casts considerable suspicion on all of the pH readings.

I have discussed this material with Dr. Reiber, and as soon as I hear

from Mr. Schuhmacher of Calgon concerning the acquisition of additional test strips and Mr. Osborn of Consolidated Western Steel for some strips of typical well casing material, we will set up some laboratory tests in an attempt to run down various factors that may be contributing to corrosion.

We need to secure as much history as possible on each of these wells. Would you have any suggestions on how this can be done with the least amount of individual effort. I have looked through all of the old records we have here and none of these 12 appear in them. I would like to know about the date of drilling, depth, well log, water levels, and any other data pertaining to operation or maintenance of the well or pump. A test by P.G.& E. would be helpful and no doubt Ed Griffin can help on that.

I found the water analysis of 4 of these wells in some of the post analysis, but that is all. They compared quite closely with the more recent ones, except for chlorides in Pappas No. 4 which showed 30.5 m.e. in 1950 and only 4.73 in 1953.

I will plan to come down during the last week of August or the first week of September to carefully recheck the pH, collect another sample on which we will run free CO_2, and take out the test strips. Perhaps you can suggest a date.

Very truly yours,

V. H. Scott
Assistant Irrigation Engineer

VHS:ljl

Encl.