29th September 1920.

Dr E. D. Clark,

Seattle, Wash.

Dear Dr Clark;-

On arriving home yesterday I found your letter of the 27th inst., and thank you for the trouble you have gone to and for the full report you made regarding our salmon. I have to bother you however for more information as the laboratory reports covering results of the investigation are not quite clear, and there are one or two results shown which do not coincide with my recollection of our conversation.

Cooking.

On your forms a sufficient cook is represented by +; an insufficient cook by — ; but in nearly every examination shown both these marks are entered in the column that designates the results found to exist as regards this phase of processing. What is the reason why both sufficient and insufficient cooking is shown in these reports ?

Reddening of Flesh.

What does this reddening indicate ? Is it a condition preceding, or accompanying, decomposition ? I notice in some instances you record these with +, while in others with O . Is there any significance in these different marks being employed ?

Condition of Liquid.

In some instances you report samples show liquid to be "slightly turbid", "turbid", and/or "milky". What causes each of these conditions, and what do they indicate ? If they are due to processing faults how can they be avoided ?

Indole.

What is the meaning of returns shown by, say, cans Nos.4 and 5 (your numbers) of laboratory report #255 ? In No.4 examination for indole showed 80 ug., in No.5 8/10 ug. Which was the worse, and what percentage would each represent ? What percentage does the government deem permissable ? In your letter you say only one can contained an excessive quantity of indole. Can you tell if this was can No. 4, and, if so, was the insufficient re-cooking in any way responsible ?

Bacteriological examination, Report #255.

Can No. 5 just referred to is Mill Bay pack, cooked for 65 minutes and air cooled. In your laboratory report covering this you show both marks concerning cooking. Under heading of "Odor" you state "Fresh Fish" in the "Stale" column. Does this mean anything in particular ? Again in regard to "Cleaning" you

found cleaning to be poor, but made special notation of "gill covers". Was the poor cleaning due to other causes than the presence of these gill covers ?

Sea weed odor.

Your report states most of the samples threw off a sea weed odor, and were classed as stale. To what do you attribute this odor ? Is it an evidence of decomposition, or does it disappear shortly after the contents of tin is exposed to the air ?

Laboratory report #257, Sheet #1.

Can No. 2 (our number 2 B) you report as having a stale odor but was sufficiently cooked. No reddening of flesh was marked, nor indole recorded, but can contained aerobes. Can you give any information as to the probable causes of this can's poor condition ?

Can No. 3 (our number 2 C S) report shows to be of good odor and sufficiently cooked, but with reddened flesh. This tin was a springer, yet free from bacteria, and apparently all right in other respects. My recollection of our conversation was that you had found all the springers incipient swells, and therefore to be condemned as unfit for human consumption.

Can No. 7 (our number 3 C) you report, under heading of "Odor" as having good odor, but under bacteriological examination report it is shown to contain aerobes and gas formers and to possess a "very bad odor". Is this correct ?

Laboratory Report #257, Sheet #2.

Can No. 4 (our number 4 R) had a vacuum of 12 lbs., a stale odor, but at least average in all other respects, and did not contain indole or bacteria. As to cooking, report shows both sufficient and insufficient marks. Can you tell if the "stale" odor is the "sea weed odor" mentioned in another part of the report ? Would you consider this particular tin as marketable in its condition at time of examination, or would there be any likelihood of bacterial development later on ?

Laboratory Report #257, Sheet #3.

Can No. 1 (our number 9 C S) report shows to be of good odor, cooking ? , and of at least average in other processing conditions. It contained 1-3/10 mg. indole and both aerobes and anaerobes. What in particular would this can indicate ? What does " S1" indicate in the bacteriological examination ? What does " DEX" in Can No. 10 indicate ?

In your letter you state you are incubating ten cans to see if you can develope swells. We will be interested to learn the results as soon as possible, and would also like to know the temperature at which they were incubated, and how such temperature would compare with that in a ship's hold when in a tropical climate. Kindly furnish us with this information, if possible, when reporting on the result of your present experiments.

Very sincerely