

TO: Dr. H. Wakeham

December 5, 1966

FROM: F. E. Resnik

SUBJECT: FTC Hearing on Methods for TPM and Nicotine held on
November 30, 1966

This memo briefly highlights the FTC public hearing on methodology for the determination of TPM and nicotine. Emphasis will be placed on the witnesses' statements regarding the four questions raised by the Commission concerning (1) butt length, (2) wet vs. dry, (3) the reporting of results, and (4) the sample size.

Summary

A summary of the hearing is as follows. Arguments on butt length were heard supporting a 23 mm butt, a 25 mm butt, a 30 mm butt, a constant amount of tobacco burned, a constant amount of unsmoked tobacco butt plus filter, and tipping paper plus 3 mm. No one mentioned a value other than 3 mm as a length beyond the tipping paper. Several speakers recommended the use of long overwrap to prevent the smoker from smoking to a shorter butt length. No one favored reporting the results on a wet basis. Arguments were heard for reporting results to the nearest 1 mg or 0.1 mg for tar and 0.1 mg or 0.01 mg for nicotine. Supporters were found for reporting data on an average per puff basis and on a per cigarette basis. Some speakers favored presenting data on a puff by puff basis. There were supporters for RTD being measured as well as those who felt it should be neglected. A similar situation existed for weight selection and the conditioning of cigarettes prior to smoking. The sample size ranged from 60 to 200 cigarettes. Speakers recommended the analysis of carbon monoxide and "toxic gases" as health hazards.

The opening statement by Chairman Paul Rand Dixon emphasized the purpose of the meeting and the fact that the witnesses must confine their presentations to the questions before the Commission. The agenda for the meeting is attached.

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Hammond

The first speaker was E. Cuyler Hammond of the American Cancer Society. In regard to butt length, he recommended a 23 mm butt or tipping paper plus 3 mm in the case of filters. He stated that the lower economic group smoke to shorter butt lengths (15 mm) and these people must be informed. In answer to a question from Dixon, he stated that he thought Wynder smoked to a 23 mm butt in his lab.

Hammond stated that the data should be reported on a dry basis.

A report of the FTC data should be made available to all interested parties and in sufficient detail so that it can be repeated in other laboratories. These data should be reported to the nearest 0.1 mg tar and nearest 0.01 mg nicotine; however, for the general public the data should be reported to the nearest mg tar and nearest 0.1 mg nicotine. The reporting of data should be on a puff by puff basis as Hammond felt the reporting of data on an average per puff basis was meaningless. The last few puffs of a cigarette are high in tar and should be reported.

A sample size of 60 cigarettes smoked is ample because very small differences in tar delivery are insignificant. The sample should represent those cigarettes in the market place.

Dr. Hammond made a personal recommendation, which was not in his written text, that the Commission give its laboratory time to gain sufficient experience before it reports data to the public.

Commissioner Elmor inquired as to whether the placing of a line on a cigarette to designate the butt length to which it had been tested, would be a good idea. Dr. Hammond felt it would help the public but he preferred a heavy tipping paper beyond which the smoker could not smoke.

Dixon inquired as to whether Hammond had read the three industry submissions. Hammond said no, but he said he would comment on them, as requested by Dixon, as soon as he had read them.

Hammond said that tar and nicotine may not be the bad actors. He feels carbon monoxide is the health hazard in cigarette smoke.

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Ogg

The second speaker was Dr. Clyde Ogg of the U. S. Department of Agriculture. He stated that he was not the sole author of the publication in JAOAC, but served as the chairman of a committee represented by American, Philip Morris, L & M, and Consolidated Cigar. He stated that there were differences of opinion on the methodology which were resolved by majority rule.

Ogg stated that there are no true values for TPM and nicotine but only relative values as defined by the method of measurement. The publishing of data for the public will not tell a smoker how much TPM and nicotine he will receive. Each smoker will get more or less TPM and nicotine depending upon his individual smoking habits. Therefore, the method employed can only be used to compare cigarettes on a relative basis.

Ogg recommends a 30 mm butt or tipping paper plus 3 mm. He stated that to smoke nonfilters to a 23 mm butt would bias the data in favor of filter cigarettes. All cigarettes must be smoked to a standard butt length for comparison purposes.

He recommended the reporting of dry TPM and felt the gas chromatographic method for water was good even though it had not been studied in a collaborative program.

Ogg recommended the reporting of the results to the nearest whole number or if three significant numbers are reported, they should include the standard deviation. He saw no advantage in reporting the data on an average per puff basis.

Ogg stated that he had no information on the sample size required, and thus could not make any recommendations on sampling.

Ogg did not mention weight selection during his presentation; however, Sweeney did inquire whether it was necessary. Ogg evaded the question.

Dixon summarized Ogg's presentation by stating that if one uses a standard procedure (same volume, puff duration, butt length, etc) one can obtain comparative data on TPM and nicotine levels of cigarettes.

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Hobbs

The third speaker was Dr. Marcus Hobbs of Duke University. Hobbs stated that he was presently consulting for L & M. He said that he had studied the tobacco industry's written reports and that he agreed with these reports in their entirety. He stated that the industry had made significant contributions to the methodology to be used in the determination of TPM and nicotine.

Hobbs felt the FTC should go along with the industry recommendation of 200 cigarettes until its own laboratory could prove that the sample size should be increased or decreased. He recommended that the cigarettes be neither weight nor RTD selected. He felt that the standard deviation need not be reported but in those cases where a brand showed a large variation the average should be reported with an asterisk. The asterisk would indicate a footnote which would show the TPM range. In answer to a question from the Commission, he reiterated that the data should be reported on an average per puff basis.

Hendricks

Walter A. Hendricks, a statistician for the Research Triangle Institute, was the fourth speaker and by far the sorriest. He could not be heard and he read his written report word for word. After ten minutes, Dixon commented that the Commission could read the report and would he care to summarize his presentation. Hendricks said he couldn't and proceeded to read. He recommended 175 cigarettes after a long statistical dissertation. The Commission asked no questions.

Spears

Dr. A. Spears of the P. Lorillard Company was the next speaker. He stated that his testimony was in no way an admission that cigarette smoking was in any way hazardous to health.

Spears said he would like to suggest the following modifications to the Ogg procedure.

1. That the butt length be 25 mm or tipping plus 3 mm whichever is the greater

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2. Four cigarettes per pad should be smoked rather than five.
3. The results should be reported on a dry basis since the standard deviation was improved about 30% over the wet TPM data.
4. The results should not be rounded and the FTC should report the TPM to the nearest 0.1 mg and nicotine to the nearest 0.01 mg.
5. A sample size of 64 cigarettes (16 pads of four cigarettes each) and the reporting of the standard deviation.
6. The subtraction of nicotine from the TPM in addition to the water.
7. He had no recommendations regarding how the sample should be obtained but he was confident that the FTC would be fair in its selection of retail outlets.
8. Cigarettes should be conditioned and weight selected prior to smoking. This will cut down on the number of cigarettes to be smoked.
9. He was definitely opposed to reporting the data on a per puff basis.

Commissioner Elmor asked Spears about putting a line on all cigarettes to indicate the butt length to which they had been smoked during testing. Spears felt that this was okay.

Bock

Dr. Fred Bock of Roswell Park Memorial Institute was the sixth speaker. He felt the butt length should be 23 mm for nonfilters and tipping plus 3 mm in case of filters. He stated that 28.4% of the consumers smoke to butt lengths shorter than 25 mm. He felt that the tobacco chemist is interested in different data than the consumer. The recent change to a 30 mm butt may be fine for the tobacco chemist but the consumer must have data on cigarettes smoked to a 23 mm butt.

The data should be reported on a dry basis.

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The results should be reported to the nearest 1 mg tar and the nearest 0.1 mg nicotine.

Regarding sample size - "statistics are misleading." Bock then proceeded to pull three cigarettes from his pocket which he stated he purchased during lunch. He said he can identify these three brands based on their tar values. His point was that there are sufficient differences in tar between these brands, and therefore one does not need a lot of statistical data. He stated that the sample should be obtained from 1 or 2 retail outlets in 10 to 15 cities. Sixty cigarettes are sufficient provided the brand has not changed. The cigarettes should be smoked quarterly and a four-quarter average reported to the public.

Bock stated that the type smoking machine used should be specified since different machines give different results. He recommended that the American falling column of water machine manufactured by Phipps and Bird be selected as the standard machine.

He also stated that the term TAR should be used because it has received public acceptance.

Dixon gave Bock a hard time about the 23 mm butt since Dixon didn't see how cigarettes could be smoked to this short butt length without burning one's fingers. Elmor inquired about the line on cigarettes again. Bock said he preferred a heavy plug wrap to prevent the smoker from smoking cigarettes to a short butt length. He used the analogue of a governor on an automobile. Bock stated that the tobacco industry can make cigarettes with long overwraps.

Bock was definitely against reporting the results on a per puff basis. He said that no smoker counts the number of puffs he takes thus the data are misleading. The report to the public would contain too much data if it also included per puff results and thus confuse the public.

Weight selection will not result in values which are different from those in which cigarettes are not weight selected. Nevertheless, Bock was in favor of weight selection.

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Elmor asked him whether the tar data would be different from loosely packed cigarettes versus firm cigarettes? Bock stated it would make a difference. Elmor also wanted to know why they couldn't just go to the corner drug store and pick up a cigarette brand for analysis. All the cigarettes of a given brand are the same. It should make no difference where the consumer obtains his cigarettes. He expects them to be identical.

Dixon asked whether he had consulted with Dr. Hammond prior to his testimony and an answer in the affirmative terminated Bock's presentation.

Cohn

Charles Cohn, the Director of Research for the Colonial Alloys Company, was the next speaker. He stated that he is working on methods to reduce tar and nicotine in cigarette smoke.

He felt that the length of the butt was not the key factor but the length of unsmoked tobacco rod was important. He recommended that a constant amount of unsmoked tobacco rod plus the filter be the recommended butt length. For example, if an 8 mm rod of unsmoked tobacco was selected, a 15 mm filter cigarette would be smoked to a 23 mm butt, and a 20 mm filter cigarette to a 28 mm butt. This is the CORESTA procedure used in Europe.

The moisture content of an opened pack of cigarettes varies during the day. Thus the sampling procedure should be to open the pack and remove one cigarette every hour from five different packs. The cigarettes should not be conditioned prior to smoking.

The tar values should be presented in whole or half milligrams and the nicotine values to 0.1 mg.

The tobacco industry can make a cigarette with zero tar by filtration. However, the RTD would be so high that the smoker couldn't draw through the cigarette. Cohn suggests that the RTD be reported along with the tar and nicotine values.

The Commission didn't ask any questions and, in fact, appeared to have little time for Cohn or the next two speakers.

Lebert

The eighth speaker was Herbert Lebert of Millbrae, California. As background he stated he had worked for Wynder and spent considerable time as an engineer for a major airline.

Lebert stated that a 30 mm butt is amply short and he does not see anyone smoking to shorter butt lengths. People do not smoke to a fixed butt length, they smoke until they are satisfied. For example, a person who smokes 50 mm of tobacco from a Lucky Strike will smoke an equal amount from a Pall Mall resulting in markedly different butt lengths. As a Benson & Hedges 100 mm is smoked, the first inch gives you less TPM and nicotine than the second inch, the second inch gives you less than the third inch, etc.

Water is important because it affects the way a cigarette burns. Cigarettes should be conditioned.

Whole numbers should be reported for TPM and nicotine values.

Lebert's real pitch was that the FTC can not legislate what people smoke and he reminded the Commission of the liquor prohibition. The smoker must be satisfied. He proposed that the smoker be given plenty of smoke but that it have the harmful high temperature fractions removed. It just so happens that Lebert has a device (Tar-Guard) which removes the high temperature fractions and allows the smoker to obtain only the low temperature fractions. Dixon suggested that he make his information available to the Surgeon General's Committee on Smoking and Health.

Hudnell

The final speaker was Dr. A. B. Hudnell an M.D. from Winston-Salem, North Carolina. He is conducting his own research and does some work with Foster D. Snell.

Hudnell endorsed the Ogg procedure.

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He had no opinion on wet vs. dry TPM.

Hudnell felt it would be misleading to report both tar and nicotine as if they were both health hazards. He then cited the Surgeon General's Report which exonerated nicotine as a health hazard. What is needed is a report on the toxic gases in cigarette smoke.

Results should be reported to the nearest milligram.

The sample size should be sufficiently large but not too complicated to prevent independent workers like himself from continuing research on smoking and health.

Hudnell's story was that it is easy to develop a low tar cigarette, but it is difficult to make a low tar cigarette which is satisfying to the smoker. He wants the smoker to control his own tar content, in fact, he has a patent application on a finger dilution control device that will allow the smoker to regulate his smoke intake. Hudnell would like the FTC to report the minimum and maximum results that one obtains from this device and let the smoker select his own tar level.

Hudnell was the last scheduled speaker and I left immediately after his presentation. I have since learned that Mr. Sorenson from the Continental Tobacco Company also testified. He had telephoned Dixon after the specified time to arrange to appear before the Commission. He talked about insecticide and mold free tobacco being less hazardous. It was my understanding that Dixon gave him a hard time about not sticking to the subjects on the agenda and he suggested that Sorenson talk to the Surgeon General about his information.

The hearing is being held open for another 30 days to allow anyone to submit additional data in writing regarding the material presented during the hearing.

FER:rab

cc: C. H. Goldsmith S. P. Pollack
A. C. Britton S. Rosen
G. W. Macon R. N. Saleeby
P. D. Smith R. B. Seligman
T. A. Budne
J. T. Landry
J. E. Lincoln

J. E. Leavitt

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FEDERAL TRADE COMMISSION

PUBLIC HEARING ON METHODS TO BE EMPLOYED IN
DETERMINING TAR AND NICOTINE CONTENT
OF CIGARETTES - NOVEMBER 30, 1966.

AGENDA

- 10:00 a.m. Opening statement by Chairman Paul Rand Dixon.
- 10:10 a.m. E. Cuyler Hammond, Sc.D.,
Vice President for Epidemiology
and Statistics,
American Cancer Society, Inc.,
New York, New York.
- 10:40 a.m. Clyde L. Ogg, Ph.D.,
Head, Special Plant Investigations,
Eastern Utilization Research and
Development Division,
U.S. Department of Agriculture,
Philadelphia, Pennsylvania.
- 11:15 a.m. Marcus Edwin Hobbs,
Durham, North Carolina.
- 11:45 a.m. Walter A. Hendricks,
Senior Research Statistician,
Research Triangle Institute,
Research Triangle Park, North Carolina.
- 12:15 a.m. A. W. Spears, Ph.D.,
Director, Research Division,
P. Lorillard Company, Inc.,
Greensboro, North Carolina.
- 12:30 p.m. Luncheon Recess.
- 2:00 p.m. Fred G. Bock, Ph.D.,
Chief, Orchard Park Laboratories
for Environmental Cancer Research,
Roswell Park Memorial Institute,
Buffalo, New York.
- 2:30 p.m. Charles C. Cohn, Chief,
Research Section,
Colonial Alloys Company,
Philadelphia, Pennsylvania.

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2:45 p.m.

Herbert A. Lebert,
Millbrae, California.

3:00 p.m.

Armstead B. Hudnell, M.D.,
Winston-Salem, North Carolina.

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Henry A. ...
Millie ...

Alston ...
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H. WAKEHAM

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