

February 28th, 1968

Notes of Visit to Messrs. Jones, Bell and Laing, Ontario  
Research Foundation February 13, 1968

Dr. Runeckles and the writer visited with Mr. J. D. Jones, Dr. A. Bell and Mr. D. Laing in Mr. Jones' office at the Ontario Research Foundation, on the afternoon of February 13th. Dr. Bell is employed by International Nickel Laboratories which are also located in Sheridan Park and Mr. Laing is a technician at the University of Toronto. The purpose of our visit was to work out the details of how we could evaluate the effect of Bell & Laing's invention upon the cigarette smoke produced by their cigarettes.

Several hours were spent with these three gentlemen in which they outlined the background of the development of their idea. Dr. Bell and Mr. Laing have either individually or jointly produced other patented inventions, some of which have reached commercial production and from which they are receiving revenues. Mr. Jones has been involved in at least one of their inventions, a device to be installed in the home for fluoridation of drinking water. This was handled by Permutit Company of Canada, a Division of Ritter Pfaudler of Canada Limited. Pfaudler Permutit have discontinued its manufacture as it was not too widely accepted. Mr. Jones felt that the chief difficulty centered around Pfaudler Permutit wishing to fluoridate all the water used in the house, rather than that used only at the kitchen tap.

The firm Intertek Development Limited has only recently been set up to handle the Bell and Laing cigarette invention.

Their idea had been submitted to Rothmans who examined the effect on TPM and nicotine but it was turned down by them on the basis that the manufacturing problems would be too difficult. No other examination of the smoke was carried out by Rothmans. They also gave samples of their cigarettes to Dr. Forbes at the University of Waterloo but they did not mention Dr. Forbes' findings. When we visited Dr. Forbes on February 14th, the comment made by him and Mr. Robinson, one of his PhD students, was that they did not think too much of the idea generally because of the high pressure drop and possibly another reason which they could not recall. They had examined the cigarettes for TPM and nicotine only. It appears that both Rothmans' and Forbes' group found some reductions in TPM and nicotine but variable in amounts.

Much of our discussion centered around the manufacture of the cigarettes and types of tests which we would carry out and the number of

100086612

cigarettes required. All of their cigarettes to date have either been hand rolled and pierced, or have been commercial cigarettes in which the tobacco has been compressed lengthwise (using their "gadget") by approximately 20 mm. & at the same time a hole created down the center of the cigarette. In this method of making a dense tobacco rod, there is a graduation of tobacco density along the length of the rod, with that portion next to the filter tip being the least dense. They would much prefer to have uniform density along the entire length of the tobacco rod and hoped that this could be achieved with cigarettes made on a commercial cigarette making machine. Their objective would be to increase the density of the tobacco by 50% more than is normal. The increase in pressure drop, as a result of this compaction, is offset at least partially by the hole down the center. All of the cigarettes tested by Rothmans and Dr. Forbes were made by their hand operated device.

For purposes of our evaluation of their invention, it was decided that the following would be carried out:

1. We would attempt to manufacture cigarettes at a density 50% higher than normal, and at two lower densities, say 40% and 30% higher than normal. In order to achieve these high densities, it may be necessary to manufacture the cigarettes at a higher than normal moisture content, possibly 15 or even 16%. The cigarettes will be shipped at this moisture level to Mr. Laing as the higher moisture will facilitate their operations of drilling out the tobacco to form the hole.
2. A low pressure drop and a high pressure drop cellulose acetate filter will be employed with each of the three densities. The size of hole will be varied in each sample in order to achieve reasonable pressure drops. The hole is to be drilled through the complete length of tobacco rod.
3. Two control samples, one having the low pressure drop filter and the other having the high pressure drop filter will be used. The two controls will be retained in Montreal as controls for our analyses, except for a small number of cigarettes to be sent to Laing as indicators of normal pressure drops.
4. We will require 500 cigarettes of each sample and we are to send them 1,000 cigarettes of each sample as they are likely to have a number of rejects.
5. It is proposed that we will carry out as many of the following tests as is possible:

100086613

Baked tar  
TPM  
Nicotine & Smoke  
Benzpyrene  
Phenol  
Aldehydes  
Acrolein  
Acids  
HCN  
H<sub>2</sub>S  
Oxides of Nitrogen  
Cilia Toxicity on Paramecia  
Colored Hydrocarbons as Determined by Bell & Laing

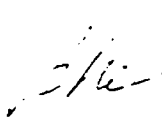
If possible we also hope to determine the total vapour phase. In addition, smoke panel tests will be carried out. Cigarettes will be sent to R & D.E., Southampton for measurements of the burning zone temperatures and of the rates of heating of the tobacco immediately in advance of the burning zone.

Bell & Laing have submitted their paper, a copy of which they gave us, to CANCER. If it is accepted, it will likely be about a year before it is published. A hurried look through the paper raised some questions in our minds as to whether or not it would be accepted by that journal.

As stated to Dr. Green, they will not contact any other organizations concerning their invention until we have completed our assessment of it. In view of the types of tests which we plan to carry out, they agreed to allow us four months after we receive the samples in which to conduct this work. This completion date is subject to review in the event unforeseen difficulties should arise. They do not wish to have any publicity of any type during this interval and we affirmed our similar position. In the event either group should be contacted by the press it was proposed that the press be given noncommittal answers. Mr. Jones will write to us outlining their understanding and concurrence on this part of the discussion.

RSW/gs

cc: Mr. L. C. Laporte  
Dr. V. C. Runeckles  
Dr. S. J. Green /  
Dr. D. G. Felton  
File



100086614