

November 15, 1940

Mr. C. F. Nailley, Vice President
The American Tobacco Company
111 Fifth Avenue
New York, N. Y.

Dear Sir:

We are enclosing report on Physical Properties of the Six Brands from the Market, Lots No. 758 and No. 759, for the week ending November 15, 1940.

WEIGHTS AND MOISTURES

Weight distribution on LUCKIES, while superior to that of all the competing brands with the exception of Camel, leans somewhat to the light side. This is particularly true of Lot No. 758 and is caused largely by cartons 3 and 4, which average 107.67 and 108.08 respectively, on a 12% basis.

Moistures on LUCKIES are of the usual order, and Camels continue to average above 12%. Raleigh Moistures, again, are very low.

CIRCUMFERENCES

Circumferences on LUCKIES average somewhat higher than the microscopic standard. Old Golds, Chesterfields and Raleighs are approximately the same size as LUCKIES; Philip Morris and Camels are considerably smaller.

AIR FLOWS

LUCKIES are intermediate in Air Flow; Raleighs are lowest and Chesterfields are highest.

SIEVE TESTS

LUCKIES exhibit a normal distribution of tobacco among the various sieve fractions. They are lower in 1/2 mm. fraction than any of the competing brands tested, although both Camel and Philip Morris have a higher percentage of 2 mm. tobacco. Raleighs 1/2 mm. fraction is, as usual, excessive.

Widths of Cut are within normal variation.

Mr. C. F. Neiley, Vice President - 2 -

November 15, 1940

LOOSE ENDS

LUCKIES exhibit from 21.7% to 69.5% less Loose Ends than all of the competing brands tested. Raleighs, as usual, are excessive in Loose Ends.

CELLOPHANE WRAPPERS

Cellophane Seals on LUCKIES are very satisfactory and compare favorably with those of all the competing brands.

Respectfully yours,

H. R. Hanner
Research Department

ESH:JCP
Enc
c.c. Mr. W. H. Ogebury

Market Lot #758SUMMARY OF THE SIX BRANDS

	<u>LUCKY STRIKES</u> (3 Branches)	<u>CAMELS</u>	<u>OLD GOLD</u>	<u>CHESTERFIELD</u>
Based on Average of	104	102	107	106
No. Cigs. Weighed.	1200	1000	1000	1000
Extra Heavy	2.42%	1.80%	7.70%	10.80%
Heavy	9.25%	15.70%	18.80%	18.00%
Standard.	64.92%	69.80%	58.00%	51.80%
Light	15.50%	12.80%	10.00%	11.80%
Extra Light	7.91%	2.70%	4.50%	8.70%
Average per 4 ounces.	106.44	102.21	100.57	104.23
Heaviest.	85	85	82	81
Lightest.	127	125	126	129
Average per 4 ounces based on 12% moisture	105.05	102.60	100.41	102.88
Moisture - High	11.69%	12.60%	12.87%	12.85%
Low	11.51%	12.07%	11.70%	11.82%
Average.	11.67%	12.58%	11.98%	11.79%
	<u>PHILIP MORRIS</u>	<u>HALLOWEEN</u>		
Based on Average of	104	108		
No. Cigs. Weighed.	800	200		
Extra Heavy	4.00%	6.50%		
Heavy	16.50%	7.50%		
Standard.	61.50%	60.00%		
Light	15.00%	12.50%		
Extra Light	8.00%	13.50%		
Average per 4 ounces.	103.75	104.56 (106.23 without cork)		
Heaviest.	82	85		
Lightest.	112	119		
Average per 4 ounces based on 12% moisture	102.83	104.60		
Moisture - High	10.97%	10.71%		
Low	10.98%	10.55%		
Average.	10.97%	10.63%		

Market Lot #758

LUCKY STRIKES
104 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	AVERAGE
Branch	Virginia		Roidaville		Durham		
Date Mfd.	0-0	0-0	T-0	R-0	0-0	0-0	
No. Cigs. Weighed . . .	100	200	100	200	100	200	1200
Extra Heavy	5.00%	3.00%	1.00%	0.50%	1.00%	4.00%	2.42%
Heavy	18.50%	12.50%	4.50%	2.50%	6.50%	14.00%	9.25%
Standard	72.50%	67.00%	50.00%	58.50%	72.50%	71.00%	64.27%
Light	4.50%	13.50%	25.00%	24.00%	16.50%	9.50%	15.50%
Extra Light	2.50%	4.00%	19.50%	16.50%	3.50%	1.50%	7.21%
Average per 4 ounces . .	102.95	104.23	108.15	108.67	105.75	106.12	108.44
Heaviest	87	83	89	93	89	85	88
Lightest	125	127	127	127	118	128	127
Average per 4 ounces based on 12% moisture	102.05	103.80	107.67	108.08	105.29	105.05	106.06
Moisture - High							11.89%
Low							11.51%
Average	11.72%	11.63%	11.61%	11.51%	11.68%	11.82%	11.67%

SUMMARY OF THE THREE BRANCHES

	<u>VIRGINIA BRANCH</u>	<u>REIDSVILLE BRANCH</u>	<u>DURHAM BRANCH</u>
Date Mfd.	0-0	T-0, R-0	0-0
No. Cigs. Weighed . . .	400	400	400
Extra Heavy	4.00%	0.75%	2.50%
Heavy	14.00%	3.50%	10.75%
Standard	69.75%	55.25%	71.75%
Light	9.00%	24.50%	15.00%
Extra Light	5.25%	18.00%	2.50%
Average per 4 ounces . .	102.56	108.41	104.42
Heaviest	85	89	85
Lightest	127	127	128
Average per 4 ounces based on 12% moisture	103.19	107.88	104.14
Moisture - High	11.72%	11.61%	11.89%
Low	11.63%	11.51%	11.68%
Average	11.68%	11.56%	11.78%

Market Lot #758

CAMELS
102 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>AVERAGE</u>
No. Cigs. Weighed.	200	200	200	200	200	1000
Extra Heavy	0.50%	1.00%	2.50%	1.00%	1.50%	1.50%
Heavy	9.00%	11.00%	25.00%	10.00%	15.50%	15.70%
Standard.	68.80%	74.00%	65.00%	74.50%	72.00%	69.50%
Light	19.50%	11.00%	8.50%	13.00%	10.50%	12.50%
Extra Light	5.50%	2.00%	1.00%	1.50%	2.50%	2.70%
Average per 4 ounces.	103.70	102.58	100.44	102.58	101.93	102.21
Heaviest.	89	89	87	91	85	85
Lightest.	128	125	118	116	120	125
Average per 4 ounces based on 12% moisture	104.48	102.78	100.91	102.94	102.01	102.60
Moisture - High						12.80%
Low						12.07%
Average.	12.86%	12.21%	12.41%	12.21%	12.07%	12.53%

OLD GOLDS
102 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>AVERAGE</u>
No. Cigs. Weighed.	200	200	200	200	200	1000
Extra Heavy	7.00%	5.50%	11.50%	5.50%	11.00%	7.70%
Heavy	22.00%	15.50%	36.00%	10.50%	19.00%	19.80%
Standard.	60.00%	65.50%	31.00%	56.50%	57.00%	58.00%
Light	8.00%	11.50%	5.00%	19.50%	8.00%	10.00%
Extra Light	3.00%	4.00%	0.50%	10.00%	5.00%	4.50%
Average per 4 ounces.	100.17	101.43	97.55	103.75	100.26	100.87
Heaviest.	82	85	80	84	85	82
Lightest.	126	122	115	125	126	126
Average per 4 ounces based on 12% moisture	92.88	100.65	97.77	104.19	99.91	100.41
Moisture - High						12.57%
Low						11.50%
Average.	11.74%	11.50%	12.20%	12.57%	11.69%	11.68%

Market Lot 1768CHESTERFIELD
108 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>AVERAGE</u>
No. Cigts. Weighed.	200	200	200	200	200	1000
Extra Heavy	7.80%	7.50%	21.00%	6.50%	9.00%	10.50%
Heavy	12.00%	14.00%	24.00%	25.50%	14.50%	18.00%
Standard.	52.00%	44.00%	47.00%	59.50%	52.50%	51.20%
Light	15.00%	22.00%	6.00%	5.00%	18.00%	11.80%
Extra Light	14.60%	12.50%	2.00%	3.50%	11.00%	8.70%
Average per 4 ounces.	106.25	106.45	100.55	105.09	105.09	104.25
Heaviest.	85	87	81	87	81	81
Lightest.	126	129	125	126	125	129
Average per 4 ounces based on 12% moisture	106.81	105.89	100.95	102.50	104.62	103.96
Moisture - High						12.55%
Low						11.55%
Average.	12.81%	11.57%	12.55%	11.82%	11.60%	11.79%

PHILIP MORRIS
124 Av.RALEXONS
102 Av.

No. Cigts. Weighed.	200	200
Extra Heavy	4.00%	6.50%
Heavy	10.50%	7.50%
Standard.	61.50%	60.00%
Light	15.00%	12.50%
Extra Light	5.00%	13.50%
Average per 4 ounces.	103.75	104.66 (106.25 without cork)
Heaviest.	82	85
Lightest.	123	129
Average per 4 ounces based on 12% moisture	102.55	104.60
Moisture - High	10.97%	10.71%
Low	10.98%	10.55%
Average.	10.97%	10.63%

Market Lot #758CIRCUMFERENCES

<u>Carton No.</u>	<u>LUCKY STRIKES</u>	<u>CAMLS</u>	<u>OLD CROW</u>	<u>CHESTERFIELD</u>
1	26.5	26.5	26.6	26.7
2	26.7	26.5	26.6	26.7
3	26.6	26.5	26.6	26.7
4	26.6	26.4	26.4	26.6
5	26.6	26.5	26.7	26.7
6	26.6			
High	26.8	26.5	26.6	26.8
Low	26.5	26.5	26.4	26.7
Average	26.67	26.40	26.70	26.72

PHILIP MORRISRELIANCE

High	26.6	26.6
Low	26.4	26.5
Average	26.51	26.62

MARK I Lot #782ALL FLOPS
ccu/mc

<u>Carton No.</u>	<u>LUCKY STRIKES</u>	<u>CAMEL</u>	<u>OLD GOLD</u>	<u>CHESTNUTS</u>
<u>Wt. per 4 Oz.</u>	104	102	102	105
1	21.64	21.80	24.08	23.82
2	22.86	22.06	27.62	24.62
3	21.66	23.06	25.94	24.86
4	20.76	22.24	21.52	24.70
5	21.70	22.02	22.62	23.64
6	22.78			
High	22.86	23.06	24.08	24.86
Low	21.64	21.80	21.52	23.82
Average	21.90	22.44	22.00	24.29

	<u>PHILIP MORRIS</u>	<u>ESLIGHTS</u>
<u>Wt. per 4 Oz.</u>	104	108
High	25.0	19.7
Low	22.2	16.8
Average	23.78	18.18

Market Lot #758SILVER TESTS

<u>Branch</u>	<u>Date Mfd.</u>	<u>Carton</u>	<u>1 2 in.</u>	<u>1 1 in.</u>	<u>5 6 in.</u>	<u>1 Dist</u>	<u>1 Sand</u>	<u>Width of Cut Cuts per Inch</u>
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LUCKY STRIKES

Virginia	0-0	1	45.44	42.19	11.08	1.51		
Virginia	0-0	2	45.55	43.86	9.77	1.32		
Reidsville	7-0	3	46.32	41.05	11.16	1.47		
Greenville	8-0	4	46.87	41.40	10.87	1.41		
Furber	0-0	5	45.50	45.00	10.58	1.12		
Carton	0-0	6	45.75	45.53	9.60	1.12		
		<i>Average</i>	45.50	43.03	10.42	1.29	0.59	33.8

CAMEL

		1	47.41	40.16	10.89	1.54		
		2	47.56	40.52	10.86	1.46		
		3	48.10	39.04	11.87	1.49		
		4	48.40	39.42	10.79	1.40		
		5	47.69	39.19	11.70	1.42		
		<i>Average</i>	47.79	39.63	11.12	1.46	0.41	33.5

OLD GOLDS

		1	42.50	45.10	12.00	2.30		
		2	39.07	46.52	12.07	2.47		
		3	40.11	45.58	12.04	2.47		
		4	45.40	41.25	11.80	2.05		
		5	47.08	39.84	11.24	1.85		
		<i>Average</i>	42.62	43.21	11.75	2.24	0.80	32.1

CHESTERFIELDS

		1	48.82	37.55	12.59	1.17		
		2	45.09	40.65	13.08	1.30		
		3	47.93	32.75	12.82	1.24		
		4	32.05	42.91	15.75	1.35		
		5	43.08	32.22	14.59	1.11		
		<i>Average</i>	45.20	40.99	13.52	1.19	0.24	34.2

PHILIP MORRIS

		<i>Average</i>	48.06	37.20	12.75	1.42		33.2
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KALEONS

		<i>Average</i>	37.42	42.21	17.26	2.11		33.5
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Market Lot #750LOOSE TUBS

<u>Carton No.</u>	<u>Weight per 4 Cigs.</u>	<u>% Tobacco Loss</u>	<u>Carton No.</u>	<u>Weight per 4 Cigs.</u>	<u>% Tobacco Loss</u>
<u>LUCKY STRIKES</u>			<u>CAMELS</u>		
1	102.68	0.81	1	103.70	1.25
2	106.63	0.94	2	102.80	1.22
3	109.94	0.97	3	93.88	1.16
4	109.62	1.06	4	101.61	1.08
5	105.00	0.93	5	101.84	1.34
6	104.13	0.92			
Average	106.87	0.94	Average	101.67	1.20

<u>ONE GOLD</u>			<u>CHESTNUTS</u>		
1	99.47	1.05	1	102.11	0.88
2	101.57	1.34	2	104.47	1.15
3	96.14	1.70	3	99.04	1.22
4	104.55	1.54	4	101.16	1.87
5	101.57	1.15	5	105.75	1.45
Average	100.72	1.32	Average	102.11	1.31

<u>PHILIP MORIS</u>			<u>REXONS</u>		
1	101.16	1.25	1	104.42	5.08
	103.94	1.51		105.80	5.07
Average	102.55	1.45	Average	104.11	5.08

Market Lot #788ALL LEAKS OF CELLOPHANE WRAPPERS

<u>Carton</u>	<u>Top</u>	<u>Bottom</u>	<u>Carton</u>	<u>Top</u>	<u>Bottom</u>
<u>LUCKY STRIKES</u>			<u>CAMELS</u>		
1	12.5	13.0	1	55.0	50.5
2	9.5	6.0	2	62.5	45.0
3	22.0	7.0	3	60.0	19.0
4	18.5	17.0	4	98.0	18.5
5	11.0	4.0	5	18.0	57.0
6	4.0	4.0			
<u>Average</u>	<u>12.9</u>	<u>8.5</u>	<u>Average</u>	<u>61.7</u>	<u>32.0</u>

<u>Carton</u>	<u>Top</u>	<u>Bottom</u>	<u>Carton</u>	<u>Top</u>	<u>Bottom</u>
<u>RED GOLD</u>			<u>CHESTERFIELDS</u>		
1	38.0	33.5	1	25.0	27.5
2	38.0	8.5	2	41.5	24.0
3	20.0	22.0	3	51.0	61.5
4	11.0	9.0	4	9.0	10.5
5	45.5	32.0	5	12.5	51.0
<u>Average</u>	<u>30.1</u>	<u>20.8</u>	<u>Average</u>	<u>25.4</u>	<u>36.9</u>

<u>Carton</u>	<u>Top</u>	<u>Bottom</u>	<u>Carton</u>	<u>Top</u>	<u>Bottom</u>
<u>PHILIP MORRIS</u>			<u>SAVITONS</u>		
1	90.0	48.0	1	70.0	69.0
	85.0	44.0		72.0	65.0
<u>Average</u>	<u>87.5</u>	<u>46.0</u>	<u>Average</u>	<u>71.0</u>	<u>77.0</u>

Market Lot #759REMARKS OF THE FOUR BRANDS

	<u>LUCKY STRIKE</u> (3 Branches)	<u>CADYS</u>	<u>OLD GOLD</u>	<u>CHESTERFIELD</u>
Based on Average of	104	102	102	108
No. Cigs. Weighed. .	1200	1000	1000	1000
Extra Heavy	2.42%	1.20%	9.10%	7.70%
Heavy	19.42%	12.50%	24.60%	14.00%
Standard.	68.10%	76.60%	66.50%	50.20%
Light	17.67%	7.10%	7.80%	18.60%
Extra Light	6.83%	1.60%	2.50%	11.50%
Average per 4 ounces.	104.85	101.50	99.88	106.29
Heaviest.	89	66	60	88
Lightest.	129	118	102	120
Average per 4 ounces based on 12% moisture	104.59	101.72	99.61	106.00
Moisture - High . . .	12.04%	12.60%	12.28%	12.27%
Low	11.64%	12.00%	11.90%	11.88%
Average.	11.78%	12.29%	12.11%	11.78%

Market Lot 4789

LUCKY STRIKES

104 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>AVERAGE</u>
Branch	Virginia		Reidsville		Durham		
Date Mfd.	0-0	0-0	0-0	0-0	0-0	0-0	
No. Cigs. Weighed. .	200	200	200	200	200	200	1200
Extra Heavy	1.00%	1.00%	2.50%	7.00%	2.50%	0.50%	2.42%
Heavy	10.50%	9.50%	11.00%	12.50%	9.50%	9.50%	10.42%
Standard	68.50%	66.00%	66.00%	67.50%	72.50%	74.50%	69.16%
Light	15.00%	15.00%	12.50%	9.50%	12.00%	12.00%	12.67%
Extra Light	10.00%	6.50%	9.00%	2.50%	3.50%	3.50%	6.25%
Average per 4 ounces.	105.75	105.75	104.90	103.47	104.42	104.60	104.85
Heaviest.	90	89	89	89	91	92	89
Lightest.	129	128	126	117	124	121	129
Average per 4 ounces based on 12% moisture	105.50	105.37	104.62	102.82	104.21	104.47	104.59
Moisture - High . . .							12.04%
Low							11.64%
Average.	11.64%	11.70%	11.76%	12.04%	11.82%	11.72%	11.76%

SUMMARY OF THE THREE BRANCHES

	<u>VIRGINIA BRANCH</u>	<u>REIDSVILLE BRANCH</u>	<u>DURHAM BRANCH</u>
Date Mfd.	0-0	0-0	0-0, 2-0
No. Cigs. Weighed. .	400	400	400
Extra Heavy	1.00%	4.75%	1.50%
Heavy	10.00%	11.75%	9.50%
Standard	61.75%	66.75%	72.50%
Light	15.00%	11.00%	12.00%
Extra Light	9.25%	6.25%	3.50%
Average per 4 ounces.	105.75	104.18	104.61
Heaviest.	89	89	91
Lightest.	129	126	124
Average per 4 ounces based on 12% moisture	105.54	104.03	104.54
Moisture - High . . .	11.70%	12.04%	11.82%
Low	11.64%	11.76%	11.72%
Average.	11.67%	11.90%	11.77%

Market Lot #752CIGARETTES
102 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	AVERAGE
No. Cigs. weighed.	200	200	200	200	200	1000
Extra Heavy	1.00%	3.00%	1.50%	0.00%	0.50%	1.20%
Heavy	15.50%	11.50%	18.50%	10.00%	8.00%	13.60%
Standard.	74.00%	72.00%	74.00%	80.50%	81.50%	76.40%
Light	7.50%	7.50%	5.00%	8.00%	7.50%	7.10%
Extra Light	2.00%	2.00%	1.00%	1.80%	2.50%	1.80%
Average per 4 ounces.	101.69	100.75	100.76	101.76	102.39	101.58
Heaviest.	90	88	90	98	87	86
Lightest.	117	118	118	115	115	116
Average per 4 ounces based on 11% moisture	101.98	100.91	101.51	101.75	102.56	101.72
Moisture - High						12.60%
Low						11.00%
Average.	12.60%	12.14%	12.49%	12.00%	12.32%	12.28%

OLD CIGARETTES
102 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	AVERAGE
No. Cigs. weighed.	200	200	200	200	200	1000
Extra Heavy	8.00%	12.50%	4.00%	17.00%	4.00%	9.10%
Heavy	28.00%	31.50%	16.50%	29.00%	16.00%	24.60%
Standard.	64.00%	60.50%	64.50%	47.50%	66.00%	66.50%
Light	7.50%	3.00%	10.50%	8.50%	11.00%	7.80%
Extra Light	2.50%	0.50%	4.50%	1.00%	5.00%	2.80%
Average per 4 ounces.	99.12	97.67	101.57	97.42	101.20	99.59
Heaviest.	80	81	85	81	87	80
Lightest.	115	118	112	115	119	112
Average per 4 ounces based on 17% moisture	99.40	97.75	101.46	97.45	101.52	99.52
Moisture - High						12.28%
Low						11.50%
Average.	12.25%	12.07%	11.90%	12.04%	12.26%	12.11%

Market Lot 4752CHESTERFIELD
108 Av.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>AVERAGE</u>
No. Cigs. Weighed. .	200	200	200	200	200	1000
Extra Heavy	15.00%	12.00%	2.00%	3.00%	6.50%	7.70%
Heavy	16.00%	25.00%	8.50%	5.50%	15.00%	14.00%
Standard.	51.50%	48.50%	46.50%	42.00%	56.50%	50.20%
Light	12.50%	7.50%	25.50%	23.00%	14.50%	16.60%
Extra Light	6.50%	7.00%	17.50%	19.50%	7.50%	11.60%
Average per 4 ounces.	102.44	102.55	103.51	102.36	104.85	105.23
Heaviest.	84	86	87	90	90	85
Lightest.	121	122	126	120	122	120
Average per 4 ounces based on 10% moisture	102.76	102.69	103.02	107.71	104.06	105.00
Moisture - High . . .						12.27%
Low						11.55%
Average.	12.27%	12.14%	11.61%	11.48%	11.53%	11.76%