

**ONTARIO
SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST**

IN THE MATTER OF THE *COMPANIES' CREDITORS
ARRANGEMENT ACT*, R.S.C. 1985, c. C-36, AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF IMPERIAL TOBACCO CANADA
LIMITED AND IMPERIAL TOBACCO COMPANY LIMITED

APPLICANTS

**MOTION RECORD OF THE KNIGHT CLASS ACTION PLAINTIFFS
(Motion to Approve Knight Class Counsel Fee)**

January 13, 2025

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Court File No. 19-CV-615862-00CL
Court File No. 19-CV-616077-00CL
Court File No. 19-CV-616779-00CL

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IN THE MATTER OF THE *COMPANIES' CREDITORS
ARRANGEMENT ACT*, R.S.C. 1985, c. C-36, AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF **JTI-MACDONALD CORP.**

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF **IMPERIAL TOBACCO CANADA LIMITED
AND IMPERIAL TOBACCO COMPANY LIMITED**

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF **ROTHMANS, BENSON & HEDGES INC.**

Applicants

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(as of December 9, 2024)**

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**ONTARIO
SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST**

IN THE MATTER OF THE *COMPANIES' CREDITORS
ARRANGEMENT ACT*, R.S.C. 1985, c. C-36, AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF IMPERIAL TOBACCO CANADA
LIMITED AND IMPERIAL TOBACCO COMPANY LIMITED

APPLICANTS

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TAB 1

Court File No. CV-19-616077-00CL

ONTARIO
SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST

B E T W E E N:

IN THE MATTER OF THE *COMPANIES' CREDITORS*
ARRANGEMENT ACT, R.S.C. 1985, c. C-36, AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF IMPERIAL TOBACCO CANADA
LIMITED AND IMPERIAL TOBACCO COMPANY LIMITED

APPLICANTS

NOTICE OF MOTION
(Motion to Knight Class Counsel Fee returnable January 29, 2025)

The Knight Class Action Plaintiffs will make a motion before the Honourable Chief Justice Morawetz of the Ontario Superior Court of Justice (Commercial List) on Wednesday, January 29, 2025 at 10:00 a.m., or as soon after that time as the Motion can be heard.

PROPOSED METHOD OF HEARING: The Motion is to be heard

- In writing under subrule 37.12.1(1);
- In writing as an opposed motion under subrule 37.12.1(4);
- In person;
- By telephone conference;
- By video conference

THE MOTION IS FOR

1. An Order substantially in the form included in the Motion Record at Tab 3 providing the following relief:

- (a) Approving the Knight Class Counsel Fee to be paid from the Knight Class Action Plaintiffs Settlement Amount to the Knight Class Counsel in respect of their fees, disbursements and costs and any applicable taxes payable thereon; and
- (b) Permitting the Knight Class Counsel to pay an honorarium to the representative plaintiff, Mr. Kenneth Knight, from the Knight Class Counsel Fee.

2. Such further and other relief as this Court may deem just.

THE GROUNDS FOR THE MOTION ARE

1. Pursuant to Article 14.9 (1) of the CCAA Plan, the Knight Class Counsel Fee shall be paid out of and deducted from the Knight Class Action Plaintiffs Settlement Amount. The Knight Class Counsel Fee and the retainer agreement respecting fees and disbursements between the Knight Class Counsel and the representative plaintiff in the Knight Class Action are subject to the approval of the CCAA Court.

2. The Knight Class Action Plaintiffs and their counsel have advanced their claims against Imperial Tobacco Canada Limited since 2003. They have obtained success and have contributed

to the overall result in the CCAA Plan. They support the approval of the CCAA Plan.

3. The fee sought by Knight Class Counsel is reasonable, consistent with the work done, the risk undertaken, the result achieved and the expectations of the client.

4. The Knight Class Action was first tobacco class action certified in Canada with certification granted on February 8, 2005. The Quebec Class Actions were certified 13 days later on February 21, 2005.

5. The Knight Class Action anticipated problems seen in another tobacco class action filed in Ontario, *Caputo v. Imperial Tobacco Ltd.*, which was litigated for 8 years, and in which certification was denied in 2004.

6. Certification was denied in *Caputo* because it was overly broad and included numerous potential classes within it.

7. The Knight Class Action took a more focused approach. Instead of suing an entire industry, Mr. Knight sued only Imperial Tobacco, the largest of Canada's three major tobacco companies. Mr. Knight's suit focused on the deceptive descriptors used in marketing light and mild cigarettes, the industry's largest product category at that time. Mr. Knight limited his claim to the statutory causes of action available under trade practices legislation. Rather than seek damages for personal injury, thereby engaging issues of causation for various multi-factor diseases, Mr. Knight limited his claim to economic damages. He sought disgorgement of illegal profits earned from an allegedly deceptive trade practice.

8. It was clear from the outset that the money sought in the Knight Clas Action would be for

a *cy-pres* distribution to assist class members indirectly by funding charitable institutions to undertake relevant medical research. This is set out at paragraph 3 of the certification decision of Madam Justice Satanove at *Knight v. Imperial Tobacco Canada Limited.*, 2005 BCSC 172.

9. The creation of the Cy-pres Fund in the CCAA Plan is exactly the remedy that Mr. Knight has sought from the outset of his lawsuit. Mr. Knight supports the creation of the Cy-Pres Fund and is pleased to contribute the Knight Class Action Plaintiffs Settlement Amount to the Cy-Pres Fund less payment of the Knight Class Counsel Fee.

10. The Knight Class Action was the first tobacco lawsuit to deal with the potential liability of the federal government for tobacco industry wrongs. The Applicant filed a third party claim against Canada in the Knight Class Action on October 29, 2004. It alleged that if the marketing strategy behind its light and mild cigarettes was deceptive then the fault lay with the federal government in permitting or encouraging such a strategy.

11. For the first years of the Knight Class Action, the federal government actively opposed class certification, appealed therefrom, and adopted legal arguments that were consistent with those taken by the Applicant.

12. After May 2006, once certification was established, the federal government's posture in the Knight Class Action changed. They now directed their fire towards the Applicant, and they sought to have the third party claim struck. They were eventually successful in that respect. Their regulatory posture on light and mild cigarettes also changed at this time.

13. An innovative feature of the Knight Class Action was that not only did it seek monetary relief, but it also sought injunctive relief, and a common issue was certified for that purpose.

Specifically, Mr. Knight wanted light and mild cigarette brand descriptors removed from the Canadian marketplace.

14. In November 2006, the Competition Bureau acted to remove light and mild cigarette descriptors from the Canadian marketplace by 2007.

15. Following the dismissal of the third party claim, Canada delivered a \$5 million bill of costs to the Applicant for its work in the Knight Class Action.

16. There are multiple reported decisions in the Knight Class Action, including two at the British Columbia Court of Appeal and one at the Supreme Court of Canada. At the time the stay order was issued in these CCAA proceedings in March 2019, the Applicant and Mr. Knight were engaged in a written discovery process pursuant to a discovery agreement, and answers to written interrogatories were due from the Applicant starting in May 2019.

17. Mr. Knight obtained three experts reports in the proceeding. These are from: a) Professor Hammond, concerning the science of light cigarettes and smoker behaviour, b) Dr. Burns, concerning the regulatory history of light cigarettes, and c) Mr. Crosson, calculating the Applicant's profits from the sales of light cigarettes in British Columbia during the class period.

18. The value of the Knight Class Action claim as set out in the CCAA Plan of \$484 million corresponds with the expert testimony of Mr. Crosson.

19. The Knight Class Action Plaintiffs Settlement Amount is \$15 million. This works out to a recovery of 3.2%, which is comparable to the percentage of recovery of the provincial and territorial governments.

20. Knight Class Counsel's retainer agreement with Mr. Knight provides for a 1/3 contingency fee, plus disbursements, interest on those disbursements, and taxes.

21. Knight Class Counsel seeks approval of a fee of \$5 million in fees, plus the applicable sales taxes and \$1,062,746.62 for disbursements, including interest on those disbursements.

22. The value of Knight Class Counsel's time on this file is approximately \$2.9 million. The fee sought represents a modest uplift on the work-in-progress carried by Knight Class Counsel over a period of 22 years. Class Counsel took on a challenging case and have brought it to a successful conclusion. They are seeking to recover a fee consistent with their retainer agreement.

23. The Knight Class Action helped to contribute to the result in this CCAA proceeding. It was the first tobacco class action certified in Canada at a time when the prospects for such claims appeared bleak. It was the first tobacco lawsuit to deal with potential federal government liability, an issue that affected virtually all the claims in this proceeding. From the outset in 2003, the Knight Class Action was focused on obtaining *cy-pres* relief, a remedy which is now central to the CCAA Plan. Another goal of the Knight Class Action was to remove light and mild cigarette descriptors from the marketplace. A common issue of injunctive relief was certified for that purpose. After fighting this lawsuit for several years, the Canadian government changed its regulatory posture towards light and mild cigarettes in November 2006 and it acted to remove light and mild cigarette descriptors from the marketplace by July 2007.

24. There were light cigarette class actions filed in other jurisdictions. The result obtained in this case compares favourably with results obtained in similar cases.

25. Knight Class Counsel proposes to pay an honorarium to the representative plaintiff, Mr. Knight, for his service to the class and public, provided that such payment is approved by the CCAA Court. The payment, if approved, would come from the Knight Class Counsel Fee.

26. Mr. Knight has been a dedicated and engaged class representative for the past 22 years. His service is worthy of recognition.

27. Such further and other grounds as counsel may advise and this Court may permit.

THE FOLLOWING DOCUMENTARY EVIDENCE will be used at the hearing of the Motion:

1. The Affidavit of Nicola Hartigan, sworn January 13, 2025; and
2. Such further and other evidence as counsel may advise and this Court may permit.

Dated: January 13, 2025

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Lawyers for the Knight Class Action

Plaintiffs

TO: THE COMMON SERVICE LIST

**IN THE MATTER OF the *Companies' Creditors Arrangement Act*, R.S.C. 1985, c. C-36,
as amended**

Court File No: CV-19-616077-00CL

**AND IN THE MATTER OF A PLAN OF COMPROMISE OR ARRANGEMENT OF
IMPERIAL TOBACCO CANADA LIMITED AND IMPERIAL TOBACCO
COMPANY LIMITED**

APPLICANTS

ONTARIO
SUPERIOR COURT OF JUSTICE

Proceeding Commenced at Toronto

NOTICE OF MOTION
(Approval of Knight Class Counsel Fee)

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TAB 2

Court File No. CV-19-616077-00CL

**ONTARIO
SUPERIOR COURT OF JUSTICE
(COMMERCIAL LIST)**

IN THE MATTER OF THE COMPANIES CREDITORS
ARRANGEMENT ACT, R.S.C. 1985, c.C-36 AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE
OR ARRANGEMENT OF IMPERIAL TOBACCO CANADA LIMITED
AND IMPERIAL TOBACCO COMPANY LIMITED

APPLICANTS

**AFFIDAVIT OF NICOLA HARTIGAN
(sworn January 13, 2025)**

I, Nicola Hartigan, of the City of Vancouver, in the Province of British Columbia, lawyer,
MAKE OATH AND SAY:

1. I am a lawyer with Klein Lawyers LLP in Vancouver, which was appointed by the Supreme Court of British Columbia as class counsel in the certified class action *Knight v. Imperial Tobacco Canada Ltd.*

2. I have been with Klein Lawyers LLP, and its predecessor firm, Klein Lyons, since 2003 when I first joined as a summer student, and later as an articling student and then as a lawyer. My legal career at Klein Lawyers spans the entirety of the litigation in the Knight Class Action which has extended for 22 years.

A. Our Firm's Experience

3. Klein Lawyers has 30 years of experience prosecuting class actions across Canada. Our managing partner, David Klein, was called in 1980 and has been repeatedly recognized by Lexpert as one of the most frequently recommended lawyers in class action litigation. We were the first law firm to obtain certification of a class action under the *British Columbia Class Proceedings*

Act, the first law firm to obtain certification under the *Manitoba Class Proceedings Act* and the first law firm to obtain certification under the *Newfoundland and Labrador Class Actions Act*. We have successfully resolved many class actions on behalf of our clients and our expertise has been repeatedly recognized by Canadian courts. A copy of our firm's *curriculum vitae* is attached as **Exhibit A**.

4. We believe that the CCAA Plan will benefit the members of the Knight Class Action and we support its approval.

B. Retainer

5. Kenneth Knight signed a retainer agreement with our firm on April 22, 2003. This is attached as **Exhibit B**. A supplemental agreement was signed on April 30, 2007. This is attached as **Exhibit C**.

C. Pleadings

6. The action was commenced by Statement of Claim, dated May 8, 2003, which is attached as **Exhibit D**.

7. The Defendant delivered a Statement of Defence, dated April 29, 2004, which is attached as **Exhibit E**.

8. The Defendant filed a Third Party Notice against the Government of Canada, dated April 29, 2004, which is attached as **Exhibit F**.

D. Certification and the Focused Structure of the Knight Action

9. Class certification was vigorously contested in the Knight Class Action. It was argued over four days on October 25-29, 2004 in the Supreme Court of British Columbia. Both the Defendant and the Federal Government opposed class certification.

10. Certification was granted by Justice Satanove by reasons dated February 8, 2005. See *Knight v. Imperial Tobacco Canada Limited.*, 2005 BCSC 172.

11. The Knight Class Action was the first tobacco class action certified in Canada. The Quebec Class Action Plaintiffs followed 13 days later with certification granted in that province on February 21, 2005. See *Quebec Council on Tobacco and Health v. JTI-MacDonald Corp.*, 2005 CanLii 4070 (QC CS).

12. No other tobacco class actions achieved certification in any other Canadian province although a number of cases were filed in different provinces and certification was argued and denied in three instances: See *Caputo v. Imperial Tobacco Ltd.*, 2004 CanLii 24753, *Ragoonanan v. Imperial Tobacco Canada Limited*, 2008 CanLii 19242 and Newfoundland and Labrador, see *Sparkes v. Imperial Tobacco Canada Limited.*, 2010 NLCA 21.

13. The Knight Class Action anticipated the problems which arose for plaintiffs in a tobacco class action filed in Ontario in 1995. Certification of that action was denied in 2004. See *Caputo v. Imperial Tobacco Ltd.*, 2004 CanLii 24753. Justice Winkler (as he then was) found that the case was overly broad and unwieldy. He wrote that the plaintiffs “have melded a number of potential classes into a single proceeding.” See *Caputo* at para 45.

14. While the Knight plaintiffs did not have the benefit of Justice Winkler's decision in *Caputo* when we filed the Knight action, we were thinking along the same lines. To avoid the problems seen in *Caputo*, the Knight plaintiffs filed a more focused case. We sought to file a single class on a single topic. Instead of suing an entire industry, we sued only Imperial Tobacco, the largest of the three major Canadian tobacco companies. We targeted a distinct marketing strategy over a more confined period with respect to a specific product category – light and mild cigarettes.

15. Notwithstanding the narrowed focus of the case, the litigation was highly complex. It concerned issues of smoking behaviour, addiction, health risks, cigarette design, and marketing. It engaged matters of expert evidence and a lengthy documentary record of industry conduct extending over decades. Light and mild cigarettes were the leading product category for the Canadian tobacco industry going back to the 1970s. The Applicant's light and mild brands, such as Players' Light and Du Maurier Light, were its highest selling brands and at the core of its marketing strategy for many years. At certification, the Applicant argued that despite the plaintiff's efforts to focus the case, the proposed class was still "overly broad and unmanageable". See *Knight v. Imperial Tobacco Canada Limited.*, 2005 BCSC 172 at para 41.

16. Our expert Richard Crosson calculated that the Applicant sold 15.1 billion light and mild cigarettes in British Columbia during the class period. With such sales, this case engaged the rights of hundreds of thousands of consumers in the province who purchased the products.

17. In framing the Knight Class Action, we focused on a statutory cause of action. Specifically, we alleged that the marketing of light and mild cigarettes by the Applicant was a deceptive trade practice within the meaning of the *Trade Practices Act*, R.S.B.C. 1996, c.457 and the *Business Practices Act*, S.B.C. 2004, c.2.

E. *Cy-pres* Relief as a Core Goal of the Knight Class Action

18. A key strategy we adopted to improve the prospects for certification and success at trial was to focus on economic relief available under trade practices legislation instead of advancing negligence claims for personal injury. Our goal was to seek aggregate monetary relief in the form of disgorgement of profits received by the Applicant in its sale of light cigarettes where we alleged that such products constituted a deceptive trade practice. That money could then be applied by *cy-pres* distribution under the British Columbia *Class Proceeding Act* to help fund medical research for the benefit of class members. We viewed this approach to aggregate monetary relief as less complex and expensive than seeking to prove individual causation for personal injury damages for masses of class members suffering from a variety of multi-factor diseases associated with smoking.

19. Our focus on *cy-pres* relief in the Knight Class Action is described in Justice Satanove's reasons certifying the action:

"The plaintiff does not seek damages for each class member, but rather an aggregate damage award that may be distributed in whole or in part to charitable institutions involved in researching and treating illnesses related to smoking."

Knight v. Imperial Tobacco Canada Limited., 2005 BCSC 172 at para 3

20. The creation of the *Cy-pres* Fund in the CCAA Plan is exactly the remedy that Mr. Knight has sought from the outset of this litigation. Mr. Knight supports the creation of the *Cy-Pres* Fund and is pleased to contribute the Knight Class Action Plaintiffs Settlement Amount to the *Cy-Pres* Fund less payment of the Knight Class Counsel Fee.

F. The Role of the Federal Government in the Knight Class Action

21. After class certification was granted, the Applicant and the federal government both appealed. The appeal was largely denied by the British Columbia Court of Appeal on May 5, 2006,

with some variance to the common issues and to the class period. See *Knight v Imperial Tobacco Canada Limited*, 2006 BCCA 235.

22. Thereafter, the federal government brought a motion in the Knight Class Action to strike the third party claim against it. This was argued on February 15 and 16, 2006 and April 10, 2007. The Applicant argued that if there was any liability for a tobacco company in the marketing of light and mild cigarettes then the fault rested with the regulator in permitting or encouraging such a marketing strategy.

23. Justice Satanove struck the third party claim against Canada on July 3, 2007. See *Knight v. Imperial Tobacco Canada Limited*, 2007 BCSC 964.

24. The Knight Class Action was the first tobacco lawsuit in Canada in which the potential liability of the federal government was tested. A similar third party claim was brought against Canada by the tobacco industry defendants in British Columbia's health care cost recovery suit. Canada brought a motion to strike that third party claim in the provincial suit on March 3 to 6, 2008, and the motion was granted on April 10, 2008. See *British Columbia v. Imperial Tobacco Canada Limited*, 2008 BCSC 419.

25. The Applicant appealed. On December 12, 2009, the British Columbia Court of Appeal in a 3-2 decision granted the appeal in part, allowing certain portions of the third party claim to survive. See *Knight v. Imperial Tobacco Canada Limited*, 2009 BCCA 541.

26. Both the Applicant and Canada appealed to the Supreme Court of Canada. The third party claim was struck in its entirety by the Supreme Court of Canada by reasons dated July 29, 2011. See *R. v. Imperial Tobacco Canada Ltd.*, 2011 SCC 42.

27. Canada opposed certification in the Knight Class Action at the British Supreme Court in 2005 and the British Columbia Court of Appeal in 2006. Canada adopted arguments in opposition to the Knight Class Action that were aligned with arguments made by the Applicant. After May 2006, Canada's position in the litigation changed. They now directed their fire at the Applicant instead of at us as they sought to have the third party claim against Canada struck. Canada's regulatory posture towards light and mild cigarettes also changed.

28. The relief sought by the Knight Class Action was not simply monetary. We also sought injunctive relief, and in particular, we obtained certification of a common issue providing for such relief. Justice Satanove certified the following common issue: "If the Court finds that the Defendant has engaged in deceptive acts or practices contrary to the TPA and/or BPCPA, should an injunction be granted restraining the Defendant from engaging or attempting to engage in those acts or practices."

29. In other words, the Knight Class Action sought an injunction removing light and mild descriptors from the marketplace.

30. For the first years of the lawsuit, Canada opposed the certification of the Knight Class Action which included this injunctive relief. On November 9, 2006, Canada's tune changed. A deal was announced by Competition Bureau that the three largest tobacco manufacturers had agreed to remove light and mild descriptors from the marketplace by July 31, 2007 in the face of anticipated regulation. See the press release from Competition Bureau which is attached as **Exhibit G**.

31. We were pleased to see light and mild descriptors removed from the Canadian marketplace in 2007. It was a goal of this lawsuit since we filed it in 2003.

32. Following the dismissal of the third party action against Canada, it sought its costs from the Applicant in the Knight Class Action and also in the provincial health care cost suit. See *HMTQ v. Imperial Tobacco Limited*, 2015 BCSC 1713 at para 3. Canada delivered a bill of costs in the Knight Class Action of \$4,597,149.86 in Canadian dollars and \$24,582.65 in U.S. dollars for its fees and disbursements in defending the Knight Class Action.

F. Discoveries and the Quebec Trial

33. The Plaintiff brought a motion to compel the Applicant to deliver its List of Documents, which was argued on March 9, 2009 with reasons issued March 13, 2009. See *Knight v. Imperial Tobacco Canada Limited.*, 2009 BCSC 339.

34. Thereafter, the parties exchanged electronic productions. The Defendants productions were voluminous.

35. After the Supreme Court of Canada decision on the third party claim in the Knight Class Action in July 2011, the trial of the Quebec Class Actions appeared imminent, and it was commenced in March 2012.

36. Knight Class Counsel attended the Quebec trial on several occasions to observe it, and made arrangements to obtain complete copies of the trial record.

37. Following the completion of the Quebec trial, Knight Class Counsel carefully reviewed the trial record and identified exhibits from the Quebec record of relevance to the Knight Class Action. Knight Class Counsel further identified and gathered many other documents concerning the Applicant's light and mild cigarettes which had been produced in other litigation, but which had been missing from the Quebec trial record. When this work was complete, Knight Class Counsel

served the Applicant with a detailed Notice to Admit on October 3, 2016 seeking admissions on 157 documents that the Knight Class Action Plaintiffs intended to rely on at trial.

38. The Applicant initially refused to respond to the Notice to Admit, arguing that the action had been dormant. The Applicant brought a motion to dismiss the Knight Class Action for delay. This was argued before Justice Smith on June 24, 2017, with reasons issued August 23, 2017. The Applicant's motion was dismissed. See *Knight v. Imperial Tobacco Canada Limited*, 2017 BCSC 1487.

39. Following Justice Smith's ruling, the Applicant delivered its Response to the Notice to Admit on October 12, 2017.

40. Notice of Class Certification was published to the class members in the Knight Class Action by order of Mr. Justice Smith dated January 26, 2018. The deadline for class members to opt out has expired. There were no opt out requests.

41. The parties concluded a Discovery Agreement on January 26, 2018. This provided for discovery to occur by way of detailed written interrogatories, rather than orally. This made sense given the document-heavy nature of the case.

42. The Plaintiff delivered detailed written interrogatories, consisting of 196 questions, pursuant to that agreement on January 7, 2019. The Defendant wrote on January 22, 2019 to ask for an extension of time for delivery of its response. There were email exchanges on February 21, 2019 and a conference call on March 1, 2019 between counsel regarding scheduling. By email dated March 7, 2019, the Defendant agreed to provide its responses to the interrogatories in tranches with the first wave of response due the first week of May 2019.

43. The Applicant filed for CCAA protection on March 12, 2019. Further steps in the Knight Class Action, including completion of written discoveries, were placed on hold.

G. Experts

44. The Plaintiff retained several experts to assist in this case. The three primary experts retained to assist in proving liability and damages in the Knight Class Action were:

(a) Professor David Hammond, PhD, of the Department of Health Studies and Gerontology at the University of Waterloo. A copy of Professor Hammond's report is attached as **Exhibit H**.

(b) Dr. David Burns, M.D., a professor emeritus of family and preventative medicine at the University of California, San Diego School of Medicine. A copy of Dr. Burns' report is attached as **Exhibit I**.

(c) Richard Crosson, a certified business valuator. A copy of Mr. Crosson's report is attached as **Exhibit J**.

45. Professor Hammond assisted us in understanding the science of light cigarettes and that of smoking behaviour. His proposed testimony is directed at whether light cigarettes are deceptive and harmful to public health.

46. Dr. Burns assisted us with historical context. He was one of the key authors of the U.S. Surgeon General's reports on smoking and health in the 1960s. His proposed testimony helps to explain the understanding of regulators around the world as to the nature of light cigarettes, and how that differed from the understanding held by the tobacco industry.

47. Mr. Crosson assisted us in calculating damages. He reviewed publicly available

information to calculate that the Applicant generated \$942 million in revenue and \$484 million in profits from the sale of light and mild cigarettes in British Columbia during the class period.

H. Litigation in Other Jurisdictions

48. There was considerable litigation in the United States concerning light cigarettes which we followed closely given the potential overlap in terms of documents, witnesses, experts, science, and legal strategies. There were light cigarette class actions filed in at least a dozen states, several of which were certified and reached trial. We retained the American law firms of Sheller P.C. and Charles Tauman P.C. to assist us as consultants given their long experience with light cigarette litigation in the United States. Sheller P.C. and Chuck Tauman P.C. provided us documents, information, insights, and litigation strategies we would not have otherwise been able to obtain.

49. The United States Department of Justice brought a lawsuit against the American tobacco industry alleging, among other things, that the marketing of light cigarettes had been fraudulent. The trial judge agreed. An excerpt of her trial judgment is attached at **Exhibit K**. See *U.S. v. Philip Morris USA, Inc.*, 449 F.Supp.2d 1 (D. D.C., 2006) at pp.560-1, para 2626-29.

50. In Massachusetts, a light cigarette class action was certified under that state's consumer protection statute, and it was tried to verdict. The trial judge found in favour of the plaintiffs on the common issues of liability and aggregate damages. A copy of the trial judgement is attached as **Exhibit L**. *Aspinall v. Philip Morris*, Suffolk County Superior Court Civil Action No. 98-6002-BLS1, dated February 19, 2016.

51. In Arkansas, a light cigarette class action was certified by the state supreme court as *Philip Morris Companies, Inc., v. Miner*, 2015 Ark. 73. The action settled on the brink of trial with a

lump sum payment of \$45 million to the class. The settlement was approved by the trial judge in 2016 as fair and reasonable. See *Wayne Miner and James Easley, Individually, and on behalf of all others similarly situated v. Philip Morris Companies, Incorporated*, Case No. CV 2003-4661, Circuit Court for Pulaski County, Arkansas.

52. A light cigarette class action was issued in Newfoundland and Labrador as *Sparkes v. Imperial Tobacco Canada Limited*, Court File No. 2004 01 T.2716 CP on June 30, 2004 by the firm of Chesley Crosbie Barristers. We agreed to work with Mr. Crosbie's firm and to assist him in *Sparkes*. In return, Mr. Crosbie agreed to assist us with the Knight Class Action and to serve as part of our trial team.

53. *Sparkes* was not certified by the Newfoundland court. See: *Sparkes v. Imperial Tobacco Canada Ltd.*, 2008 NLTD 207, affirmed, 2010 NLCA 21.

I. Damages

54. If we had been successful on liability and damages at a trial of the Knight Class Action, the damages sought would have been disgorgement of profits earned by the Applicant from the sale of a deceptive product to class members in British Columbia during the class period. Mr. Crosson calculated these as \$484 million.

55. In developing the CCAA Plan, the mediator and the monitors assigned the value of \$484 million to the Knight Class Action. This corresponds with Mr. Crosson's expert evidence.

56. The Knight Class Action Plaintiffs Settlement Amount is \$15 million. This is roughly proportionate to the value that the Provinces and Territories are receiving. The total value of the provincial and territorial claims is \$944,518,989,400. They are receiving \$24.725 billion payable

over time as their settlement amount. This works out to a recovery of 3.8%. The Knight recovery is a comparable 3.2%.

J. Time and Disbursements

57. The value of our firm's work in progress on this matter is approximately \$2.9 million and list of our disbursements is attached as **Exhibit M**.

58. We have carried all of this work in progress and all of these disbursements ourselves for the past 22 years. We financed the disbursements internally. We did not get outside financing. Unlike in Ontario or Quebec, with their Class Proceedings Fund and Fonds d'aide aux actions collectives, respectively, there is no public financing option available for class action plaintiffs in British Columbia. There was no way for us to get the assistance of a public body to help us with fees and disbursements as was a possibility for the Quebec Class Action Plaintiffs.

59. Interest on the disbursements has been added in accordance with our retainer agreement and with s.38(5) of the British Columbia *Class Proceedings Act*.

60. A summary of the time and disbursements expended by Sheller P.C. and Charles Tauman P.C are attached as **Exhibits N** and **O**, respectively. They agreed to be paid at the conclusion of the case and, as a result, have assisted us for 20 years without payment. We have agreed to give them a 50% top up on their billing. The top up payment will come out of our class counsel fee.

K. Honorarium

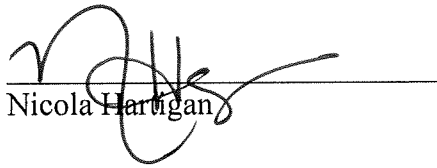
61. We propose to pay an honorarium to the court appointed representative plaintiff, Kenneth Knight. We propose to make that payment from the fee awarded to our firm provided that such

payment to the representative plaintiff is acceptable to the CCAA Court.

62. Mr. Knight has been an active and engaged client for the past 22 years. He has attended many of the court hearings in the Knight Class Action. We have communicated by email, phone and in person with him many times over the years. He has received and reviewed complex and confidential documents in this case and he has asked thoughtful questions. Mr. Knight is an average consumer who smoked light cigarettes when he was younger and eventually managed to quit after much difficulty. In bringing this case, he was seeking to help others like himself, and to help advance public health. We are glad to have Mr. Knight as a client and we find his persistence and dedication to be remarkable.

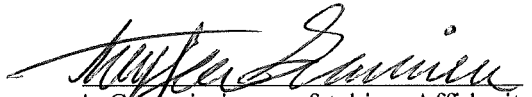
SWORN BEFORE ME at the)
City of Vancouver in the)
Province of British Columbia)
this 13th day of January, 2025)


A Commissioner for Taking Affidavits)
In the Province of British Columbia)


Nicola Hartigan)

TAYLOR DERRIEN
Barrister & Solicitor
400 - 1385 West 8th Avenue
Vancouver, B.C. V6H 3V9

This is Exhibit "A" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

Klein Lawyers LLP

Klein Lawyers LLP ("Klein Lawyers") is respected nationwide and employs over 50 staff with offices in Vancouver and Toronto, Canada. Klein Lawyers has been a pioneer in class action litigation in Canada, with more than 27 years' experience in this practice area. Many of the firm's lawyers have been called to the bar in British Columbia, Ontario, and Washington State.

Klein Lawyers has also served as plaintiffs' counsel in the first class actions certified in several provinces, including British Columbia, Manitoba, and Newfoundland and Labrador.

David Klein, founder and partner of Klein Lawyers, is one of Canada's top class action lawyers. He has been recognized by *Lexpert* as one of the most frequently recommended lawyers in class action litigation and by *Best Lawyers in Canada* as leading counsel in class action litigation. Klein Lawyers has also been recognized by *Global Law Experts* as Class Action Law Firm of the Year in Canada.

Klein Lawyers has recovered hundreds of millions of dollars, for thousands of victims in a wide range of landmark lawsuits. The firm has undertaken, and demonstrated great skill and expertise, in class actions covering diverse industries ranging from defective drugs and medical devices to securities misrepresentations, deceptive marketing, pension and retirement benefits, food poisoning, institutional negligence, and environmental class actions.

JUDICIAL RECOGNITION OF KLEIN LAWYERS LLP'S EXPERIENCE

Klein Lawyers' class action expertise has been repeatedly recognized by Canadian courts over the past decades, including in the following reported decisions.

1. *Sawatzky v. Société Chirurgicale Instrumentarium Inc.*, 1999 CanLII 6982 at para. 11
 - "The negotiations were conducted by plaintiffs' counsel with experience in class proceedings."
2. *Sawatzky v. Société Chirurgicale Instrumentarium Inc.*, 1999 CanLII 6982 at para. 17
 - "The settlement agreement is supported by the representative plaintiff Bonita Jean Sawatzky. It was negotiated by senior counsel in three jurisdictions who have extensive experience in class actions. The plaintiff's counsel in each of the Canadian class actions consider the settlement agreement to be fair and in the best interests of the class."
3. *Fischer v. Delgratia Mining Corp.*, [1999] B.C.J. No. 3149 at para. 23
 - "I am satisfied it is apparent from the material, which is complicated, and, I might say very well organized, that it is evidence of the difficulty of the work and the skill and competence of counsel."
4. *Knudsen (Guardian of) v. Consolidated Food Brands Inc.*, 2001 BCSC 1837 at para. 40
 - "Plaintiff's counsel are senior members of the bar who have extensive experience in personal injury litigation and class actions...Plaintiff's counsel were aggressive in the prosecution of the action. I agree with Mr. Klein that this represents a very timely resolution of the litigation."
5. *Knudsen (Guardian of) v. Consolidated Food Brands Inc.*, 2001 BCSC 1837 at para. 42
 - "The degree of skill and effort of counsel for the representative plaintiff is evidenced by the result obtained for class members and the timeliness of the resolution.."
6. *Wilson v. Servier Canada Inc.*, [2001] O.J. No. 1615 at para. 17
 - "Third, this claim is very complex. Klein, Lyons is an experienced firm in class proceedings. There is an advantage to the national class generally to have the participation of additional counsel in this proceeding."
7. *Killough v. Canadian Red Cross Society*, 2001 BCSC 1745 at para. 28

- "Mr. Klein is experienced and able in relation to class proceedings. Over time he has acquired expertise that permits him to make a valuable contribution to the advancement and resolution of class actions."

8. *Killough v. Canadian Red Cross Society*, 2001 BCSC 1745 at para. 29

- "In so far as the settlement with the Province of British Columbia is concerned, I am satisfied that Mr. Klein's tenacity resulted in the discovery of the fact that funds had been advanced by the Province to the Red Cross and assisted in the attainment of the order in the *CCAA* proceeding resulting in the payment of \$6,531,382 to the Province."

9. *Killough v. Can. Red Cross*, 2001 BCSC 1060 at para. 13

- "He observed that the plan was the culmination of "two years of intense and complex negotiations", and he commended counsel for their efforts in what he characterized as a "difficult and sensitive case."

10. *Killough v. Can. Red Cross*, 2001 BCSC 1060 at para. 25

- "Thus, counsel's recommendation of the settlement has a firm foundation in fact, and is enhanced by the extensive experience of counsel in personal-injury litigation generally and in blood-related litigation and class actions."

11. *Pinksen v. Shell Canada Ltd.*, [2004] O.J. No. 42 at para. 1

- "The settlement is approved as well. It is imaginative and user friendly."

12. *Fakhri v. Alfalfa's Canada Inc.*, 2005 BCSC 1123 at para. 14

- "3. The class was represented in the negotiations by an experienced class action counsel."

13. *Fakhri v. Alfalfa's Canada Inc.*, 2005 BCSC 1123 at para. 23

- "The lead class counsel is experienced and has been recognized by the courts in approving settlements in other class actions. As well, the material in this case was complex and well organized, and is indicative of both the difficulty of the work and skill of counsel"

14. *Jeffrey v. Nortel Networks Corp.*, 2007 BCSC 69 at para. 29

- "Counsel for the plaintiffs in the various jurisdictions appear to be experienced in class proceedings, and to be recognized as skilled litigators. Certainly that is the case with the plaintiffs' British Columbia counsel."

15. *Rideout v. Health Labrador Corp.*, 2007 NLTD 150 at para. 71

- "The Plaintiff has been represented by two experienced litigation firms, Ches Crosbie Barristers of St. John's, and Klein Lyons of British Columbia."

16. *Rideout v. Health Labrador Corp*, 2007 NLTD 150 at para. 74

- "Ches Crosbie Barristers has been a pioneer in the field of class actions in this Province and Klein Lyons has been successfully prosecuting class actions in Canada since the onset of class proceedings litigation in British Columbia and Ontario."

17. *Killough v. The Canadian Red Cross Society*, 2007 BCSC 941 at para. 35 (corrigendum)

- "I acknowledge that competent counsel have been engaged and have been at risk in this class action over an extended period of time, and that the value of the settlement to the class as a whole is significant."

18. *Richard v. British Columbia*, [2010] B.C.J. No. 1363 at para. 12

- "Klein Lyons, a firm of highly experienced class action counsel, came on the record of these proceedings for the plaintiffs in September 2007."

19. *Richard v. British Columbia*, [2010] B.C.J. No. 1363 at para. 13

- "Klein Lyons undertook the massive preparation necessary to take this matter to trial."

20. *McSherry v. Zimmer GMBH*, 2012 ONSC 4113 at para. 21

- "Klein Lyons is a litigation firm focusing on class actions. The firm is based in Vancouver but also has a Toronto office. It is one of the pioneers and veterans of class action litigation in Canada."

21. *Verna Doucette v. Eastern Regional Integrated Health Authority*, 2010 NLTD 29 at para. 42

- "In *Rideout v. Health Labrador Corp.*, 2007 NLTD 150, 2007 CarswellNfld 268 (N.L. T.D.), Russell, J., noted the experience of the same Plaintiff's counsel as in this action."

22. *Verna Doucette v. Eastern Regional Integrated Health Authority*, 2010 NLTD 29 at para. 58

- "The foregoing review of the evidence and the submissions of competent counsel for both sides support a determination in favor of approval. Both counsel, throughout, vigorously advanced their clients' positions. An arms-length mediation with the parties physically separated effected the resolution"

23. *Verna Doucette v. Eastern Regional Integrated Health Authority*, 2010 NLTD 29 at para. 59

- "In my view, the evidence and counsels' submissions confirm the complexity of litigation and time inherent in the full advancement of these claims. The estimate of 7 years to complete is not unreasonable..."

24. *McSherry v. Zimmer GMBH*, 2012 ONSC 4113 at para. 148

- "In reaching my decision to award carriage to Klein Lyons for Jones/McSherry, I focused on what was in the best interests of class members."

25. *Stanway v. Wyeth Canada Inc.*, 2015 BCSC 983 at para. 39

- "Mr. Klein of Klein Lawyers has over 20 years of experience in the field of class action litigation and has appeared as plaintiffs' counsel in over 25 certified class actions in six provinces. He has written and presented extensively on the topic and has a particular interest in medical products litigation."

26. *Jones v. Zimmer GMBH*, 2016 ONSC 1847 at para. 47

- "(e) Recommendations and Experience of Counsel for the plaintiffs and the defendants are both very experienced in the field of class actions and where personal injury is involved."

27. *Merlo v. R*, 2017 FC 533 at para. 2

- "The proposed settlement has a number of features and benefits that extend beyond a strictly monetary compensation scheme and as a result, the Settlement Agreement goes well beyond what the Plaintiffs may have been awarded after a trial"

28. *Merlo v. R*, 2017 FC 533 at para. 34

- "Class counsel, Klein Lawyers LLP and Kim Orr Barristers P.C., are highly experienced in class action litigation. Both firms have practiced in the specialized area of class action litigation for over 20 years"

29. *Merlo v. R*, 2017 FC 533 at para. 25

- "I accept the submissions of Class counsel that even without discovery they had a wealth of information on the nature of the claims they were advancing. They were also well positioned to understand the factual matrix of these claims and the challenges they would face in moving forward with the litigation."

30. *Merlo v. R*, 2017 FC 533 at para. 89

- "This was multi-faceted complex class litigation with substantive legal complexity involving novel claims with potential legislative barriers. While relief of this nature is outside the litigation realm, these were factors which the class members insisted upon and which added a level of complexity for Class counsel."

31. *Merlo v. R*, 2017 FC 533 at para. 93

- “As noted above, there is no question that Class counsel is highly experienced in the specialized field of class actions. Their experience has been noted in other class action decisions (*Ramdath v. George Brown*, 2016 ONSC 3536 at para 2, [2016] OJ No. 2803; *McSherry v Zimmer GMBH*, 2012 ONSC 4113 at para 21, 226 ACWS (3d) 351; *Richard v. British Columbia*, 2010 BCSC 773 at para 12, 191 ACWS (3d) 734; *Rideout v Health Labrador Corp*, 2007 NLTD 150 at para 270 Nfld & PEIR 90)”

32. *Tiller v. R*, 2020 F 321 at para 67

- “As expected, Class Counsel recommend this Settlement Agreement. More germane is that both firms are experienced class action counsel involved in a variety of such claims. Klein Lawyers have direct, highly relevant experience from *Merlo- Davidson* and are well versed in issues, complexities of the case and needs of the Class.”

33. *Nelson v. Telus Communications Inc. (Part 3)*, 2021 ONSC 24 at para 11

- “On January 5, 2018, Ms. Nelson commenced her proposed class action. Her proposed Class Counsel is Klein Lawyers, LLP, an experienced and well-qualified class action law firm.”

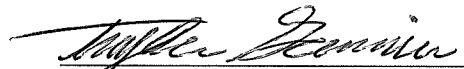
34. *Percival v. Canada*, 2024 FC 824 at para 86

- “The Class Members were represented by Class Counsel and Quebec Subclass Counsel, who have established expertise in class actions. As mentioned earlier, along with Mr. Percival’s tenacity, Class Counsel’s experience coming out of the Sixties Scoop settlement may well have been the impetus for the institution of the underlying class proceeding on a national level, leading to the Settlement Agreement. In fact given their experience in the area of class actions for over 27 years, this Court has previously recognized Class Counsel as highly experienced in class action litigation (see *Merlo* at para 34; *Tiller v Canada*, 2020 FC 323 at para 36).”

35. *Percival v. Canada*, 2024 FC 2098 at para 57

- “Both Counsel have a wealth of experience in the area of Indigenous-based class actions, with a developed understanding of the nature of the claims, the particularities of Indigenous communities in terms of both history and geography, and the legal issues that surround them. Clearly, Counsel were uniquely placed to secure the results obtained.”

This is Exhibit "B" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

FEE AGREEMENT BY
REPRESENTATIVE PLAINTIFF

I, Kenneth Knight in my capacity as representative plaintiff, retain Klein, Lyons to act as counsel on my behalf and on behalf of smokers and former smokers of "light" and/or "mild" cigarettes manufactured, sold or distributed by Imperial Tobacco.

I authorize Klein, Lyons to talk all necessary steps, incur reasonable expenses and employ such agents and counsel as you consider necessary.

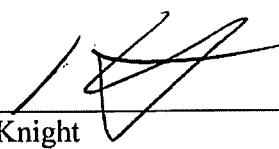
The legal fee paid to Klein, Lyons for its work as class counsel will be thirty-three and a third percent (33 1/3%) of all amounts class members receive for damages and interest. Taxes (P.S.T. and G.S.T.) will be paid from any funds recovered over and above the fees charged.

Klein, Lyons, will be reimbursed for all disbursements plus interest incurred in work for the common benefit of class members. Interest on disbursements will be calculated at the rate of 10% per annum, not compounded. The payment of legal fees, disbursements and taxes to Klein, Lyons, shall be a first charge on proceeds and shall be made by lump sum at the conclusion of this matter or in any manner that the Court shall direct. I will have no personal liability for any costs or disbursements incurred in this proceeding.

Section 38 (2) of the Class Proceedings Act provides that "An agreement respecting fees and disbursements between a solicitor and a representative plaintiff is not enforceable unless approved by the court on application of the solicitor."

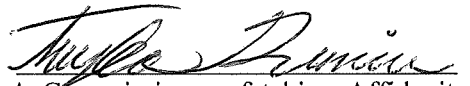
I understand, that pursuant to the Legal Profession Act and the Law Society Rules, I have the right within 90 days of the date of this Agreement, or of the date this Agreement is terminated, to apply to a District Registrar of the Supreme Court of British Columbia, to have this agreement reviewed whether or not I have paid your fees.

Dated at Vancouver, B.C. this 22nd day of April, 2003.



Kenneth Knight

This is Exhibit "C" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

SUPPLEMENTAL FEE AGREEMENT OF REPRESENTATIVE PLAINTIFF

Whereas, on April 22, 2003, Kenneth Knight ("Knight") signed a fee agreement (the "Agreement") with Klein Lyons with respect to a class action, *Knight v. Imperial Tobacco Canada Ltd. et al.*;

And whereas, the outcome of this litigation remains uncertain;

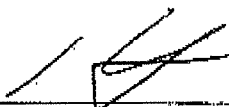
And whereas, Knight and Klein Lyons wish to clarify in writing certain matters with respect to the Agreement, and to address issues that have arisen in the cases decided under the *Class Proceedings Act* in the intervening four years since the Agreement was signed;

Knight hereby agrees as follows:

1. Section 38(1)(b) of the *Class Proceedings Act* requires that counsel give an estimate of the expected fee. The fee under the Agreement is a percentage (33 1/3%), plus taxes. It is difficult to estimate the fee because the recovery is uncertain and the fee could vary considerably depending on the result. By way of examples however, if the recovery were \$30 million, the fee would be \$10 million, if the recovery were \$150 million, the fee would be \$50 million, and if the recovery were \$15 million, the fee would be \$5 million. In all cases, the fee would be a percentage as set out in the Agreement and paid as a lump sum.

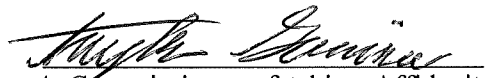
2. Fees and disbursements are to be paid from any recoveries obtained, as and when they are obtained, calculated in accordance with the Agreement. This obligation of payment does not await any final disposition of the litigation, and is owed whether or not such payment is characterized as "interim". For example, it is contemplated that the common issue trial will be bifurcated and will first deal with the Players Light and DuMaurier Light brands. Any recoveries made with respect to these brands will result in fees and disbursements owing under the Agreement, whether or not litigation with respect to other brands remains outstanding.

Dated at ^{Roberts Creek, B.C.} ~~Victoria~~, this ³⁰ day of April, 2007



Kenneth Knight

This is Exhibit "D" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia



L 031300
No.
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

KENNETH KNIGHT

PLAINTIFF

AND:

IMPERIAL TOBACCO CANADA LIMITED

DEFENDANT

WRIT OF SUMMONS

Brought under the *Class Proceedings Act*, R.S.B.C. 1996, c. 50

(Name and
address of
each
Plaintiff)

Kenneth Knight
c/o Klein Lyons
1100 - 1333 West Broadway
VANCOUVER, B.C. V6H 4C1

(Name and
address of
each
Defendant)

Imperial Tobacco Canada Limited
3711 St.-Antoine Street
Montreal, Quebec H4C 3P6

ELIZABETH THE SECOND, by the Grace of God, of the United Kingdom, Canada and Her other Realms and Territories, Queen, Head of the Commonwealth, Defender of the Faith.

TO the Defendant(s): Imperial Tobacco Canada Limited

TAKE NOTICE that this action has been commenced against you by the Plaintiff(s) for the claim(s) set out in this writ.

IF YOU INTEND TO DEFEND this action, or if you have a set-off or counterclaim which you wish to have taken into account at the trial, YOU MUST

- (a) GIVE NOTICE of your intention by filing a form entitled "Appearance" in the above registry of this Court within the Time of Appearance provided for below and YOU MUST ALSO DELIVER a copy of the "Appearance" to the Plaintiff's address for delivery, which is set out in this writ, and
- (b) if a Statement of Claim is provided with this writ of summons or is later served on or delivered to you, FILE a Statement of Defence in the above registry of this court within the Time for Defence provided for below and DELIVER a copy of the Statement of Defence to the Plaintiff's address for delivery.

YOU OR YOUR SOLICITOR may file the Appearance and the Statement of Defence. You may obtain a form of Appearance at the Registry.

JUDGMENT MAY BE TAKEN AGAINST YOU IF

- (a) YOU FAIL to file the Appearance within the Time for Appearance provided for below, or
- (b) YOU FAIL to file the Statement of Defence within the Time for Defence provided for below.

TIME FOR APPEARANCE

If this Writ is served on a person in British Columbia, the time for appearance by that person is 7 days from the service (not including day of service).

If this Writ is served on a person outside British Columbia, the time for appearance by that person after service is 21 days in the case of a person residing anywhere within Canada, 28 days in the case of a person residing in the United States of America, and 42 days in the case of a person residing elsewhere.

(or, where the time for appearance has been set by order of the court, within that time.)

TIME FOR DEFENCE

A Statement of Defence must be filed and delivered to the plaintiff with 14 days after the later of

- (a) the time that the Statement of Claim is served on you (whether with this writ of summons or otherwise) or is delivered to you in accordance with the Rules of Court, and
- (b) the end of the Time for Appearance provided for above.

(or, if the time for defence has been set by order of the court, within that time.)

(1) The address of the registry is: 800 SMITHE STREET VANCOUVER BC V6Z 2E1
(2) The plaintiff's address for delivery is: KLEIN, LYONS #1100 - 1333 WEST BROADWAY VANCOUVER BC V6H 4C1 Fax number for delivery: (604) 874-7180
(3) The name and office address of the plaintiff's solicitor is: David A. Klein KLEIN, LYONS #1100 - 1333 WEST BROADWAY VANCOUVER BC V6H 4C1

The plaintiff's claim is detailed in the Statement of Claim.

The plaintiff claims the right to serve the defendant outside British Columbia pursuant to Rules 13(1)(i) and 13(1)(o) on the basis that injunctive relief is requested and on the basis that the claim arises out of goods or merchandise sold or delivered in British Columbia.

Dated: May 8, 2003


Solicitor for the Plaintiff

No.
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

Between:

KENNETH KNIGHT

Plaintiff

AND:

IMPERIAL TOBACCO CANADA LIMITED

Defendant

Brought under the *Class Proceedings Act*, R.S.B.C. 1996, c.50

STATEMENT OF CLAIM

1. The Plaintiff, Kenneth Knight, is a resident of Roberts Creek, British Columbia.
2. The Defendant, Imperial Tobacco Canada Limited, is Canada's largest tobacco company, manufacturing nearly 70% of the cigarettes sold in this country. The Defendant is a company incorporated pursuant to the laws of Canada and has a registered office at 3711 St. Antoine Street West, Montreal, Quebec.
3. This is a proposed class action brought pursuant to the *Trade Practices Act*, R.S.B.C. 1996, c. 457 (the "TPA") and the *Class Proceedings Act*, R.S.B.C. 1996, c.50 on behalf of persons who made purchases in British Columbia of "light" and "mild" cigarettes manufactured, sold and/or distributed by the Defendant. The class is intended to include persons who are "consumers" within the meaning of section 1 of the TPA. Excluded from the proposed class are directors, officers and employees of the Defendant.

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4. The terms "light" and "mild" are descriptors that the Defendant uses to market certain brands of its cigarettes. In this claim, the terms "light" and "mild" encompass the following and similar descriptors: "extra light", "ultra light", "special mild", "extra mild" and "ultra mild". Cigarettes marketed by the Defendant with these descriptors are hereinafter referred to as "Light Cigarettes" or "Lights" some of which are listed in Appendix A attached to this Statement of Claim. In the course of its business, the Defendant solicited, offered, advertised and promoted the sale of its Light Cigarettes to consumers in British Columbia. As such, the Defendant is a "supplier" within the meaning of section 1 of the TPA.

5. Each purchase by the Plaintiff and by class members of the Defendant's Light Cigarettes for personal use is a "consumer transaction" within the meaning of section 1 of the TPA. Each solicitation and promotion by the Defendant with respect to the purchase by consumers of the Defendant's Light Cigarettes is a "consumer transaction" within the meaning of section 1 of the TPA.

6. By the late 1960's, scientific studies suggested that smoking cigarettes with higher tar and nicotine levels might be correlated with an increased risk of developing smoking-related diseases. These studies threatened the Defendant's continued profitability. The Defendant responded by publicly denying that smoking caused disease and by undertaking public misinformation campaigns which sought to create doubt in the public mind about the negative health effects of smoking, the magnitude of the risk of smoking, and the relative safety of their 'filtered' brands versus cigarettes generally.

7. The Defendant further responded by designing, developing and marketing its Light Cigarettes. All cigarettes release numerous harmful toxins into the cigarette smoke including, but not limited to, tar, nicotine, carbon monoxide, formaldehyde, hydrogen cyanide and benzene (herein referred to collectively as "toxic emissions"). Each of the Defendant's Light Cigarettes contains the descriptor "light" or "mild" in the brand name. This descriptor is intended to convey, and does convey, to consumers an implicit message of health reassurance. This message is that the Defendant's Light Cigarettes are safer or less harmful than regular cigarettes,

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that they release significantly less toxic emissions, and that smokers who are worried about their health may switch to Lights instead of quitting or as a graduated step in the consumer's effort to quit smoking.

8. The Defendant's Lights are not less harmful, nor do they transmit significantly fewer toxic emissions to the smoker. The Defendant designed its Lights in such a way that the standard testing machines used to measure toxic emissions would record lower levels than the levels that are actually delivered to the smoker. The Defendant thereby achieved apparent support for its claim that its Lights are "light" or "mild" and that they deliver significantly lower levels of toxic emissions, including tar and nicotine, as compared to regular cigarettes. The designation of the Defendant's Light Cigarettes as "light" or "mild" had the capability, tendency or effect of being deceptive or misleading. The Defendant published the machine read toxic emission levels, and specifically the levels of tar and nicotine, of its Light Cigarettes in promotional material and on the cigarette packages. The publication of those levels had the capability, tendency or effect of being deceptive or misleading.

9. The so-called lowered toxic emission deliveries of the Defendant's Light Cigarettes were unrelated to benign changes in the content of the tobacco in its Lights, but rather depended on changes in cigarette design and composition that deliver lower levels of toxic emissions under machine testing conditions while continuing to deliver high levels of toxic emissions to smokers under normal smoking conditions. The changes include the addition of tiny vent holes on or around the cigarette filter and the alteration of the materials used in filters and cigarette papers in order to dilute the toxic emissions of smoke per puff as measured by the industry standard testing machines. These changes are negated by smokers of Light Cigarettes through a phenomenon known as "compensation." Compensation is the tendency of smokers of Light Cigarettes to block the vent holes with their lips or fingers, inhale more deeply, puff more frequently, hold the smoke in their lungs for longer and smoke more cigarettes.

10. The Defendant conducted its own tests of its Light Cigarettes that revealed that the actual amounts of toxic emissions delivered to the smoker under normal use are substantially higher

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than the levels read by the testing machines. The Defendant failed to make timely disclosure to consumers of the existence and results of those tests. Additionally, the Defendant failed to disclose that the smoke produced by its Lights is more genotoxic (causing genetic and chromosomal damage) per milligram of tar than regular cigarettes. The failure to make these disclosures had the capability, tendency or effect of being deceptive or misleading.

11. The Defendant engaged in numerous deceptive acts or practices in the solicitation, offer, advertisement and promotion of its Light Cigarettes contrary to the provisions of the TPA. In particular, the Defendant:

(a) stated numbers for toxic emissions levels, and specifically levels of tar and nicotine, for its Light Cigarettes that did not reflect the actual deliveries of toxic emissions to smokers under normal smoking conditions and that thereby had the capability, tendency or effect of deceiving or misleading consumers;

(b) stated numbers for toxic emissions levels, and specifically levels of tar and nicotine, for its Light Cigarettes that had the capability, tendency or effect of deceiving or misleadingly the consumer as to the relative levels of toxic emissions, including tar and nicotine, of the Defendant's Light Cigarettes in comparison with regular cigarettes;

(c) used the descriptors "light" and "mild" in the marketing of its Light cigarettes which had the capability, tendency or effect of conveying a deceptive or misleading message of health reassurance to consumers;

(d) failed to disclose the material fact that the so-called lowered toxic emission deliveries to its Light Cigarettes were unrelated to benign changes in the content of the tobacco in its Lights, but rather depended on changes in cigarette design and composition that deliver lower levels of toxic emissions under machine testing conditions while continuing to deliver high levels of toxic emissions to smokers under normal smoking conditions;

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(e) failed to disclose the material fact that the techniques employed by the Defendant that purportedly reduce the levels of tar in its Light Cigarettes increase the harmful biological effects, including mutagenicity (genetic or chromosomal damage) caused by the tar ingested by the consumer;

(f) failed to disclose the material fact that the vent holes on Light Cigarettes are in locations where they might be covered or blocked by the smoker's lips and/or fingers under normal use, thereby increasing the level of toxic emissions delivered to the consumer;

(g) failed to mark the vent holes or to otherwise disclose their existence or location, so that smokers could attempt to smoke the cigarettes in a manner that would allow them to obtain the claimed reductions in toxic emissions;

(h) failed to disclose the material fact that smoking the Defendant's Lights with the vent holes blocked results in the smoker receiving an increased amount of toxic emissions, including tar and nicotine, and that those levels might not be significantly lower than the amounts of those substances the smoker would receive from a 'regular' cigarette;

(i) failed to disclose the material fact that smoking the Defendant's Lights with increased puff volume, frequency or duration results in the smoker receiving an increased amount of toxic emissions, including tar and nicotine, and that those levels might not be significantly lower than the amounts of those substances the smoker would receive from a 'regular' cigarette;

(j) failed to instruct the smoker, on the packaging or elsewhere, on how to smoke the cigarettes correctly in order to obtain the claimed lowered toxic emissions, including avoidance of blocking the vent holes and increased puff volume, frequency and duration;

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(k) failed to disclose the material fact that the smoke produced from its Light Cigarettes is not less harmful to the smoker, nor is it less harmful to persons exposed to second-hand smoke;

(l) failed to disclose the material fact that the Defendant manipulated the design and content of its Light Cigarettes so as to increase the nicotine levels delivered to the consumer under normal smoking conditions; and

(m) failed to disclose the material fact of the effects of Defendant's manipulation of the nicotine content of its Light Cigarettes.

12. The Plaintiff purchased and consumed approximately one and a half packs a day of the Defendant's Light Cigarettes in British Columbia for a period of approximately 17 years. The Plaintiff did not have knowledge of the conduct by the Defendant alleged in this claim, or of any facts from which it might reasonably be concluded that the Defendant was so acting, or which would have lead to the discovery of such actions, until a few months prior to the commencement of this action. The Defendant willfully concealed material facts relating to the cause of action asserted in this claim and in particular willfully concealed the facts alleged in paragraph 11 of this Statement of Claim.

13. The Defendant has unfairly and unjustly profited from its deceptive acts and practices with regard to its solicitation, offer, advertisement and promotion of its Light Cigarettes.

14. The Plaintiff seeks a declaration pursuant to section 18(1)(a) of the TPA that the Defendant's acts or practices as described in paragraph 11 of this Statement of Claim are deceptive acts or practices.

15. The Plaintiff seeks a permanent injunction pursuant to section 18(1)(b) of the TPA restraining the Defendant from engaging or attempting to engage in the deceptive acts or practices described in paragraph 11 of this Statement of Claim.

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16. The Plaintiff seeks an order pursuant to section 18(2) of the TPA requiring the Defendant to advertise to the public the particulars of any judgment, declaration, order or injunction against it in this action on terms and conditions the court considers reasonable and just.

17. The Plaintiff seeks statutory compensation for the class pursuant to sections 18(4) and 22(1) of the TPA, including an order that the Defendant refund all sums that class members paid to purchase the Light Cigarettes, or that the Defendant disgorge all revenue or profits which it made on account of Light Cigarettes purchased by class members, together with any further relief which may be available under the TPA.

18. The Plaintiff does not seek to recover damages for personal injuries suffered by any class member.

19. Smoking causes or contributes to numerous diseases and health problems including, but not limited to, coronary heart disease, cancer, vascular disease, bronchitis, emphysema, pneumonia, ulcers, gum disease, thyroid disease, miscarriages and impotence. Over 20% of all deaths in Canada are attributable to smoking. The health problems caused by smoking afflict not only smokers but also those exposed to second hand smoke. The economic and social cost to the class and to society in general has been substantial. The Defendant's conduct, as outlined in this Statement of Claim, has been sufficiently high handed, callous and reprehensible that an award of punitive damages is justified.

20. The Plaintiff pleads that it is unnecessary for the Plaintiff or any class member to prove that the Defendant's deceptive acts or practices caused such persons to purchase the Light Cigarettes in order to make out a claim for relief under sections 18(1), 18(4), 22(1)(b) and 22(1)(c) of the TPA.

21. In the alternative, the Plaintiff pleads that the Defendant's deceptive acts or practices did cause the Plaintiff and class members to purchase the Light Cigarettes such that a claim for relief is made out under sections 18 and 22 of the TPA.

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22. The Plaintiff pleads that even if causation is a required element of a claim under sections 18 and 22 of the TPA, individual reliance on the deceptive acts or practices is not a required element of a cause of action under those sections.

23. In the alternative, the Plaintiff pleads that he and the class members relied on the Defendant to disclose all material facts regarding the Defendant's Light Cigarettes. The failure of the Defendant to state material facts as alleged in this Statement of Claim creates an assumption of reliance for the purpose of maintaining an action under the TPA.

24. In the further alternative, the Plaintiff pleads that the Defendant's deceptive acts or practices were calculated or would naturally tend to induce the Plaintiff and the class members to act upon the deceptive acts or practices when purchasing the Defendant's Light Cigarettes and that reliance on the Defendant's deceptive acts or practices may be inferred.

25. In the still further alternative, the Plaintiff pleads that he and the class members acted in reliance on the Defendant's deceptive acts or practices, to their detriment, when they purchased the Defendant's Light Cigarettes.

26. The Plaintiff claims, on his own behalf, and on behalf of the Class:

- (a) an order certifying the proceeding as a class proceeding;
- (b) a declaration pursuant to section 18(1)(a) of the TPA;
- (c) a permanent injunction pursuant to section 18(1)(b) of the TPA;
- (d) an order requiring the Defendant to advertise any adverse findings against it pursuant to section 18(2) of the TPA;

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- (e) disgorgement and/or restitution by the Defendant pursuant to sections 18(4) and 22(1)(b) of the TPA;
- (e) damages pursuant to section 22(1)(a) of the TPA;
- (f) punitive and exemplary damages pursuant to section 22(1)(a) of the TPA;
- (g) the costs of administering and distributing an aggregate damage award;
- (h) costs pursuant to section 37(2) of the *Class Proceedings Act*, RSBC 1996, c. 50;
- (i) interest pursuant to the *Court Order Interest Act*, RSCB 1996, c. 79; and
- (j) such further and other relief this Honorable Court may find just.

PLACE OF TRIAL: Vancouver, British Columbia.

Dated at Vancouver, British Columbia, this 8th day of May, 2003.



Solicitor for the Plaintiff

This statement of claim is filed and served by David A. Klein of the firm of Klein, Lyons, Barristers and Solicitors, whose place of business and address for service and delivery is at 1100 - 1333 West Broadway, Vancouver, B.C. V6H 4C1.

Telephone: (604) 874-7171. Fax: (604) 874-7180.

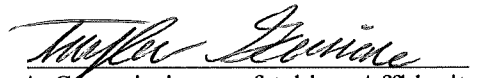
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Appendix A

Some of the Defendant's Light Cigarette Brands

1. du Maurier Light
2. du Maurier Extra Light
3. du Maurier Ultra Light
4. du Maurier Special Mild
5. Matinée Extra Mild
6. Medallion Ultra Mild
7. Player's Light
8. Player's Light Smooth
9. Player's Extra Light

This is Exhibit "E" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

No. L031300
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

BETWEEN:

KENNETH KNIGHT

PLAINTIFF

AND:

IMPERIAL TOBACCO CANADA LIMITED

DEFENDANT

**STATEMENT OF DEFENCE OF
IMPERIAL TOBACCO CANADA LIMITED**

1. The Defendant, Imperial Tobacco Canada Limited ("ITCAN"), denies the allegations in the Statement of Claim, unless expressly admitted, and puts the Plaintiff to the strict proof thereof.
2. ITCAN admits that it is Canada's largest cigarette manufacturer and that it is incorporated pursuant to the laws of Canada with a registered office at 3711 St. Antoine St. West, Montreal, Quebec.
3. ITCAN admits that it is a "supplier", that the Plaintiff is a "consumer" and that the purchase by and sale to the Plaintiff of cigarettes are "consumer transactions" within the meaning of the *Trade Practice Act*, R.S.B.C. 1996, c. 457, (the "TPA").

LIGHT AND MILD PRODUCTS

4. The descriptors "Light" and "Mild" when used as part of a cigarette brand name indicate, *inter alia*, that the deliveries of tar, nicotine and other smoke constituents as measured by standard testing methods are less than the deliveries for the corresponding regular or non

"Light" or "Mild" products within the same brand family as measured by standard testing methods.

5. There are significant differences between the "Light" and "Mild" products developed in the early to mid 1970's and those on the market today. The deliveries of tar as measured by standard testing methods for "Light" and "Mild" products sold on the B.C. market have ranged from a low of less than one milligram per cigarette to a high of 14 milligrams per cigarette.

6. There are various design features that reduce the deliveries of tar and nicotine as measured by standard testing methods. Each "Light" or "Mild" product incorporates some or all of the following design features in combination and to varying degrees:

- (a) Using specific types and grades of tobacco;
- (b) Using "puffed" or expanded tobacco (tobacco that has been expanded by air) resulting in less tobacco in each cigarette;
- (c) Using filters of different efficiencies;
- (d) Using cigarette paper of different degrees of porosity; and
- (e) Increasing ventilation in the cigarette filter.

7. ITCAN developed its first "Light" product in 1976. Since that time, all three major Canadian cigarette manufacturers have developed and introduced dozens of different "Light" and "Mild" products. There have been as many as 90 different "Light" or "Mild" products sold in B.C.

THE PURPOSE OF STANDARDIZED SMOKING TESTS

8. The tar, nicotine and other smoke constituent data found on each package of cigarettes are the standard deliveries of those smoke constituents as measured by standard testing methods. The standard delivery data are obtained through laboratory testing of cigarette under prescribed conditions.

9. Standard testing methods set various uniform smoking parameters, including the following:

- (a) A prescribed interval between puffs;
- (b) A prescribed volume for each puff;
- (c) A prescribed duration of each puff; and
- (d) The butt length of the cigarette to remain following testing.

10. The nature of these parameters change depending on the standard testing protocol employed. The original method used in Canada to produce standard machine derived deliveries was based on the method developed by the United States Federal Trade Commission ("FTC") in the 1960s. The modified FTC standard testing protocol was used in Canada until 1989 when the ISO testing method became the prescribed standard testing protocol pursuant to the *Tobacco Products Control Act*, R.S.C. 1985, c.14.

11. Since 1976, ITCAN has published on its packages tar, nicotine and other smoke constituent yields as measured by standard testing methods. Between 1976 and 1988, ITCAN published this information at the direction and request of the Federal Government. From January 1, 1989 onwards, ITCAN has published this information pursuant to the statutory requirements found in the *Tobacco Products Control Act*. From December 2000 onwards, ranges of tar, nicotine and other smoke constituent yields as measured by standard testing devices have been published on cigarette packages. Further, in British Columbia, information about tar, nicotine and other smoke constituent yields as measured by standard testing methods has been published by the Province pursuant to the *Tobacco Testing and Disclosure Regulation*, B.C. Reg. 282/98.

12. The purpose of the standardized testing methods is to provide consumers with comparative brand information about tar and nicotine and other smoke constituent yields when cigarettes are smoked in consistent and reproducible conditions. Given the variations in individual smoking behaviour it was never the purpose of the Federal Government or other health authorities to provide individual consumers with information about the actual yields of tar, nicotine or other constituents they will obtain when smoking a particular cigarette.

13. It is scientifically impossible to create a standard testing protocol that can predict the amount of tar, nicotine or other smoke constituents a particular individual will receive when smoking a particular cigarette. This is because smoking is a uniquely individualistic behaviour.

SMOKING BEHAVIOUR IS UNIQUELY INDIVIDUALISTIC

14. Each smoker smokes differently. The yields of tar and nicotine and other smoke constituents that any individual obtains from smoking depends on a variety of factors including the number of cigarettes smoked, the number of puffs taken on a cigarette, the length of puffs, the intervals between puffs, the butt length to which the cigarette is smoked, the strength of the cigarette, whether the cigarette is ventilated and whether the smoker takes steps to alter his or her smoking behaviour to compensate for an increase or decrease in smoke yields from a particular cigarette.

15. Compensation is a phenomenon that relates to changes that may occur in an individual's smoking behaviour if that individual switches between products with different deliveries of tar and nicotine as measured by standard testing devices. Compensation (increasing or decreasing an individual's intake of smoke constituents) may occur in many ways, all of which relate to the way that an individual smoker smokes. For example, compensation may occur by increasing the number of cigarettes smoked, increasing the number of puffs on each cigarette, increasing the puff volume, decreasing the duration between puffs, or blocking filter ventilation holes.

16. Whether, to what extent, and how a smoker compensates when switching brands is an individual issue. To the extent that compensatory behaviour occurs, it varies from individual to individual, but is rarely complete or permanent. Furthermore, the effect of compensation on deliveries can only be determined by examining individual smoking behaviour.

THE ROLE OF THE CONSUMERS IN THE DEVELOPMENT OF LIGHT AND MILD PRODUCTS

17. As a result of consumer demand and as a result of the facts set out in paragraphs 18 to 27 below, ITCAN developed "Light" and "Mild" cigarettes.

THE ROLE OF THE FEDERAL GOVERNMENT IN THE DEVELOPMENT AND PROMOTION OF LIGHT AND MILD PRODUCTS

18. By the mid-1960s, the international and Canadian public health consensus was that lowering the tar content of tobacco might reduce the incidence of tobacco related disease in the population of smokers by reducing exposure to tar in cigarette smoke.

19. Based on this consensus, in the late 1960s and early 1970s, the Federal Government tested brands of cigarettes manufactured by the major Canadian tobacco manufacturers to determine the tar and nicotine deliveries of their products as measured by standard testing methods. This information was then published by the Federal Government in order to communicate comparative information to consumers which would assist them in making informed choices regarding different brands of cigarettes.

20. The Federal Government's programme to disseminate tar and nicotine information recognized that many consumers would choose to continue to smoke. The Federal Government's programme was intended to encourage continuing smokers to smoke cigarettes containing less tar and nicotine as measured by standard testing methods.

21. It was the Federal Government's view that, first, lower tar cigarettes presented a reduced risk to smokers when compared to cigarettes of higher tar as measured by standard testing methods, and secondly, that the publication of tar and nicotine figures was a necessary part of its smoking and health programme.

22. Consistent with this program, the Federal Government also requested that beginning in 1976 tar and nicotine deliveries as measured by standard testing methods be printed on cigarette packages.

23. In 1978 the Federal Government directed or requested that ITCAN and other Canadian tobacco manufacturers set targets for the reduction of tar in cigarettes sold in Canada on a global basis. ITCAN agreed to attempt to reduce the "Sales Weighted Average Tar" content of cigarettes (or "SWAT" level) in accordance with government targets. SWAT levels are a measurement of the average tar content of cigarettes as measured by standard testing methods, taking into account the sales volumes of these brands. In order to reduce SWAT levels, cigarette

manufacturers had to (a) introduce into the market brands with lower tar deliveries and (b) promote the lower tar brands so they had higher sales volumes than those with higher tar and nicotine yields as measured by standard testing methods.

24. With this mandate from the Federal Government, and under the threat of regulation, Canadian tobacco manufacturers, including ITCAN, worked toward developing and marketing lower delivery products to comply with the Federal Governments requests, advice and directions.

25. Further to its policy of encouraging smokers to switch to lower tar delivery products as measured by standard testing methods, the Federal Government, at various times, set maximum targets for tar and nicotine deliveries as measured by standard testing methods, participated in the development of new breeds of tobacco, facilitated the development of lower tar products and participated in the design, development and manufacturing of cigarettes.

26. ITCAN successfully reduced the SWAT levels of its brands between 1978 and 1984 and did so in a manner that was consistent with the direction, requests and standards of the Federal Government, although ITCAN did not promote its brands on the basis that cigarettes containing lower levels of tar as measured by standard measuring methods were "safer" or "less hazardous" than cigarettes containing higher levels of tar.

27. ITCAN has at no time made health claims with respect to the safety of "Light" and "Mild" cigarettes, and in fact has been prevented by voluntary agreements and Federal Government regulation and directives from doing so.

INDIVIDUAL'S DECISION TO SMOKE "LIGHT" AND "MILD" PRODUCTS

28. Individuals select particular brands for various reasons specific to that individual. Smokers choose "Light" and/or "Mild" products for many reasons which are unique to that individual, including, reasons relating to taste or brand image and not necessarily for reasons related to tar and nicotine deliveries as measured by standard testing methods.

DAMAGES AND RELIEF

29. ITCAN denies that it has caused any economic loss as alleged or at all capable of giving rise to a claim under the *TPA* and, in any event, relief requires proof of individual reliance and causation by each potential class member.

30. In the alternative, the existence of any claim to damages or other economic claims under the *TPA* is inherently individual and depends on individual subjective valuations and preferences of consumers, including the following individual factors:

- (a) why a particular individual smokes a certain brand of cigarette;
- (b) the smoking behaviour of a particular individual;
- (c) a particular individual's knowledge about the risks of smoking generally and the risks of smoking "Light" and "Mild" cigarettes; and
- (d) when a particular individual learned information about the risks of smoking generally and the risks of smoking "Light" and "Mild" cigarettes.

31. In the further alternative, only a small portion of the purchase price of "Light" and "Mild" cigarettes consists of monies payable to ITCAN. The majority of the purchase price has, at all material times, consisted of taxes levied by both the Provincial and the Federal Government. In these circumstances, restitution is not available as relief.

THE PLAINTIFF

32. The Plaintiff was at all times aware of the risks of smoking generally and the risks of smoking "Light" and "Mild" cigarettes. Aside from having information about the risks of smoking, which has been widely known and disseminated at all material times to this action, the Plaintiff's spouse has had involvement with an anti-smoking activist group which has published information about the risks of smoking and second hand smoke for nearly twenty years. The facts relating to a particular individual's knowledge about the health risks of smoking and from what source that information was obtained will vary from individual to individual and will vary

over time. Further, many individuals will continue to smoke even if they have knowledge about the risks of smoking generally and the risks of smoking "Light" and "Mild" cigarettes.

33. The Plaintiff chose to smoke "Light" and "Mild" cigarettes of his own free will. ITCAN pleads and relies on the doctrine of *volenti non fit injuria*.

34. ITCAN denies that its use of the descriptors "Light" and "Mild" or the communication of the delivery levels of tar and nicotine yields as measured by standard testing methods on the packages of cigarettes caused or in any way contributed to the Plaintiff purchasing ITCAN's products. ITCAN made no express representation that "Light" or "Mild" products reduced the risk of disease in the Plaintiff. The Plaintiff did not rely on any representation (express or implied) made by ITCAN as alleged or at all. The facts relating to a particular individual's reliance on an alleged representation about "Light" and "Mild" cigarettes will vary from individual to individual and will vary over time.

35. In the alternative, if the Plaintiff relied on any representation at all, then the representation was made by the Federal Government or other public health authorities or medical professions in Canada. The facts relating to a particular individual's reliance on an alleged representation about "Light" and "Mild" cigarettes made by the Federal Government or other public health authorities or medical professionals will vary from individual to individual and will vary over time.

36. If the Plaintiff believed that smoking "Light" and "Mild" cigarettes have health benefits when compared to smoking regular cigarettes, which is denied, his beliefs derive from information disseminated by the Federal Government or other public health authorities or medical professionals and not from ITCAN.

37. ITCAN denies that the Plaintiff "compensated" or "compensated fully" when smoking ITCAN's products. The facts relating to a particular individual's smoking habits will vary from individual to individual and will vary over time.

38. In the alternative, the Plaintiff knew or ought reasonably to have known all facts material to his claim from the time he began to smoke and ITCAN pleads and relies on the *Limitation Act*, R.S.B.C. 1996, c. 266. The facts relating to a particular individual's knowledge

of all the facts material to this claim and when knowledge of those facts was acquired will vary from individual to individual and will vary over time.

39. The Plaintiff's claim discloses no cause of action under the *TPA*.

40. The Plaintiff has suffered no damages nor does he have a claim for restitutionary relief under the *TPA*. The facts relating to a particular individual's claim for relief will vary from individual to individual and will vary over time.

41. ITCAN says if the Plaintiff has suffered damage, which is denied, then such damage was caused or contributed to, in whole or in part, by the Plaintiff's own acts or omissions and not any act or omission of ITCAN. The facts relating to a particular individual's acts and omissions will vary from individual to individual and will vary over time. ITCAN pleads and relies upon the provisions of the *Negligence Act*, R.S.B.C. 1996, c. 333.

42. In the alternative, and in further answer to the whole of the Statement of Claim, if the Plaintiff has suffered loss as alleged or at all, the Plaintiff has failed to mitigate such loss. The facts relating to a particular individual's effort to mitigate will vary from individual to individual and will vary over time.

GENERAL PLEADINGS

43. ITCAN denies that the allegations in paragraphs 20, 22, 23 and 24 of the Statement of Claim disclose a cause of action under the *TPA*.

44. ITCAN pleads the provisions of the *Limitations Act*, R.S.B.C. 1996, c. 266.

45. ITCAN objects to the certification of the action on the basis that it does not meet the certification requirements in the *Class Proceedings Act*, R.S.B.C. 1996, c. 50.

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WHEREFORE the Defendant Imperial Tobacco Canada Limited submits that the Plaintiff's claim should be dismissed with costs to the Defendant.


Dated at Vancouver on April 29, 2004

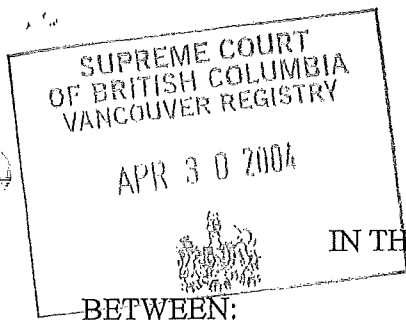


Solicitors for the Defendant, Imperial
Tobacco Canada Limited

This Statement of Defence is filed by Berardino & Harris, the Solicitors for the Defendant Imperial Tobacco Canada Limited, whose office address and address for delivery is Suite 14 – 1075 West Georgia Street, Vancouver, BC V6E 3C9. Telephone 604.647.4557. (Reference: David C. Harris/030185)

This is Exhibit "F" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia



No. L031300
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

BETWEEN:

KENNETH KNIGHT

PLAINTIFF

AND:

IMPERIAL TOBACCO CANADA LIMITED

DEFENDANT

AND:

HER MAJESTY THE QUEEN IN RIGHT OF CANADA

THIRD PARTY

THIRD PARTY NOTICE OF IMPERIAL TOBACCO CANADA LIMITED

TO: ATTORNEY GENERAL OF CANADA

AND TO: His Solicitor

THIS ACTION has been brought by the Plaintiff, Kenneth Knight against the Defendant Imperial Tobacco Canada Limited ("ITCAN"). The Plaintiff's claim against ITCAN is set out in the Writ of Summons and Statement of Claim. None of the statements of fact or allegations contained herein are intended to be, nor should they be construed as admissions to the allegations or claims advanced by the Plaintiff. ITCAN repeats and relies on its Statement of Defence.

TAKE NOTICE that ITCAN claims against Her Majesty the Queen in Right of Canada for the relief set out in this Third Party Notice.

The material facts upon which ITCAN relies are:

PART ONE

I. THE FEDERAL GOVERNMENT OF CANADA

A. The Federal Government

1. The Federal Government was, at material times, responsible for protecting the health of Canadians including consumers of tobacco products and was responsible for providing accurate and reliable health information to them.

2. The Federal Government implemented smoking and health initiatives and programmes through Health Canada. Health Canada, the successor to the Department of National Health and Welfare and the products safety branch of the former Department of Consumer and Corporate Affairs, is established pursuant to the *Department of Health Act*, S.C. 1996, Ch 8. At material times Health Canada has had a statutory duty and responsibility under Section 4 of the *Department of Health Act* and predecessor sections, to promote and preserve the health of the people of Canada including:

- (a) to promote and preserve the physical, mental and social well-being of the people of Canada;
- (b) to protect the people of Canada against risks to health;
- (c) to investigate and research public health, including the monitoring of diseases;
- (d) to establish and control safety standards and safety information requirements for consumer products; and

- (e) to collect, analyse, interpret, publish and distribute information relating to public health.

B. Agriculture Canada

3. The Federal Department of Agriculture and Agri-Food at various material times operated research facilities to promote the development, growth, marketing and distribution of tobacco and otherwise support the tobacco industry.

4. The Federal Government, Health Canada and the Federal Department of Agriculture and Agri-Food are hereinafter collectively referred to as the "Federal Government".

II. THE DEVELOPMENT OF "LIGHT AND "MILD" CIGARETTES

5. By the mid-1960s, the international and Canadian scientific consensus was that lowering the tar content of tobacco smoke might reduce the incidence of tobacco related diseases in the population of smokers.

6. In the mid-1960s, the Federal Government explored ways to reduce tar in tobacco smoke. The Federal Government determined to limit the maximum amount of tar and nicotine cigarettes could contain as measured by standard testing methods. Legislation was introduced into Parliament to achieve that objective. While the Bill did not become law, the rationale for the Bill was to encourage continuing smokers to switch to lower tar cigarettes.

7. In or about 1971, ITCAN agreed, at the Federal Government's direction or request, to comply with maximum limits for tar and nicotine in cigarettes as measured by standard testing methods. The maximum limits allowable were subsequently lowered in stages until 1984.

8. At the request or direction of the Federal Government, ITCAN designed and developed cigarettes that complied with the maximum limits and delivered lower average tar content as measured by standard testing methods. In different ways, the design and composition features, all of which were known to the Federal Government, that lowered the tar content of cigarettes as measured by standard testing methods were applied to all cigarettes so that the tar and nicotine yields of all cigarettes decreased materially from the early 1970s to the mid 1980s.

9. In 1978 the Federal Government directed or requested that ITCAN and other Canadian tobacco manufacturers set targets for the reduction of tar in cigarettes sold in Canada on a global basis. ITCAN agreed to attempt to reduce the "Sales Weighted Average Tar" content of cigarettes (or "SWAT" level) in accordance with government targets. SWAT levels are a measurement of the average tar content of cigarettes as measured by standard testing methods, taking into account the sales volumes of these brands. In order to reduce SWAT levels, cigarette manufacturers had to (a) introduce into the market brands with lower tar deliveries and (b) promote the lower tar brands so they had higher sales volumes than those with higher tar and nicotine yields as measured by standard testing methods.

10. ITCAN successfully reduced the SWAT levels of its brands between 1978 and 1984 and did so in a manner that was consistent with the direction, requests and standards of the Federal Government, although ITCAN did not promote its brands on the basis that cigarettes containing lower levels of tar as measured by standard measuring methods were "safer" or "less hazardous" than cigarettes containing higher levels of tar.

III. THE PURPOSE OF STANDARDIZED SMOKING TESTS

11. On November 20, 1968, the Federal Government for the first time released to the press a table showing the tar and nicotine content of 84 cigarette brands sold in Canada. This information was released to encourage smokers to switch to lower tar products and to enable them to compare the tar and nicotine content of cigarette smoke on a brand basis. The Federal Government continued to publish the tar and nicotine tables until 1986 (the "League Tables").

12. The information contained in the League Tables was generated by an approved protocol that measured a cigarette's average tar and nicotine consistently and reproducibly over time.

13. Given the variations in individual smoking behaviour, it was never the purpose of the testing protocol to measure tar and nicotine yields to particular individual smokers. Rather, the protocol created a single, standardized test to ensure consistency and reproducibility and to provide consumers with comparative brand information. This testing protocol became a basis of tar and nicotine information provided to consumers by or at the direction of the Federal Government, throughout the material period, even though the Federal Government knew or

understood that the machine-measured yield did not and could not measure the tar and nicotine yields to particular individuals and groups of individuals.

**IV. THE DISSEMINATION OF INFORMATION TO CONSUMERS ABOUT
"LIGHT" AND "MILD" CIGARETTES BY THE FEDERAL
GOVERNMENT**

14. The Federal Government played the principal role in the collection of tar and nicotine information, in the publication of such information and in requiring that it be printed on cigarette packaging and advertising.

15. The Federal Government published League Tables disclosing the tar and nicotine yields of various brands of Canadian cigarettes between 1968 and 1986. That information was widely publicized in the media and was used by health professionals in advising smokers on the health risks of smoking.

16. The Federal Government's programme to disseminate tar and nicotine information recognized that many consumers would choose to continue to smoke. The Federal Government's programme was intended to encourage continuing smokers to smoke cigarettes containing less tar and nicotine as measured by standard testing methods.

17. It was the Federal Government's view that, first, lower tar cigarettes presented a reduced risk to smokers when compared to cigarettes of higher tar as measured by standard testing methods, and secondly, that the publication of tar and nicotine figures was a necessary part of its smoking and health programme.

18. The Federal Government regularly published and widely disseminated other information, beyond the League Tables, all with an aim to encouraging smokers to switch to lower tar and nicotine cigarettes as measured by standard testing methods. Whatever views consumers have about the health risks associated with "Light" and "Mild" cigarettes result from the dissemination of information to consumers by the Federal Government and other sources, but not the defendant.

19. The Federal Government's website continued, until August 2003, to encourage smokers to switch to lower tar and nicotine delivery cigarettes in the event that they would not quit smoking.

20. The Federal Government published the League Tables and encouraged smokers to switch to lower tar and nicotine delivery cigarettes with full knowledge of the relevant epidemiology and scientific research pertaining to the smoking of tobacco, its effects on health and the methods by which the tar and nicotine content of tobacco smoke was reduced.

V. THE DISSEMINATION OF INFORMATION ABOUT "LIGHT" AND "MILD" CIGARETTES BY ITCAN BY REQUEST OF THE FEDERAL GOVERNMENT OR BY REGULATION

21. In 1962 and again in 1964 ITCAN agreed not to promote cigarettes on the basis of any express or implied health claims. These agreements were in furtherance of an ongoing policy of Canadian tobacco manufacturers not to make health claims about cigarettes and precluded advertising, promoting or the publishing the tar and nicotine content of particular brands of cigarettes. The Federal Government endorsed this practice.

22. Subsequently, the Federal Government changed its programme with respect to the publishing by tobacco manufacturers of information relating to tar and nicotine yields of cigarettes as measured by standard testing methods. On January 1, 1976 at the request and direction of the Federal Government and under threat of government regulation, ITCAN and other members of the Canadian Manufacturers Council ("CTMC") agreed to publish tar and nicotine information on cigarette packages.

23. From January 1, 1989 onwards, ITCAN was required under the *Tobacco Products Control Act*, S.C. 1988, c. 20 to report to the Federal Government and to publish on packages the emissions of tar, nicotine and carbon monoxide and other smoke constituent yields as measured by standard testing methods.

24. At material times, the Federal Government requested that ITCAN use its promotional expertise to market so-called "Light" and "Mild" cigarettes to meet its SWAT and SWAN targets and monitored ITCAN's promotional activities.

VI. THE FEDERAL GOVERNMENT'S KNOWLEDGE OF SMOKING AND HEALTH ISSUES

25. At material times to this action the Federal Government knew and kept abreast of every advance in medical and scientific knowledge on all matters pertaining to the smoking of tobacco and its effects on health including matters relating to cigarette design. Without limiting the generality of the foregoing, the Federal Government knew and kept abreast of research relating to the so-called phenomenon of smoker "compensation".

26. Further, the Federal Government was aware at material times of the design and composition changes to ITCAN's cigarettes which lowered the tar and nicotine yields of "Light" and "Mild" cigarettes as measured by standard testing methods.

27. The Federal Government also knew and kept abreast of every advance in chemical, biological, medical and technical knowledge and technique concerning the growing, harvesting, curing and manufacture of tobacco and tobacco products.

B. The Federal Government's Attempt to Design a "Less Hazardous Cigarette"

28. The Federal Government and particularly the Delhi Research Station of Agriculture Canada undertook a comprehensive research and development programme in support of the Canadian tobacco industry from 1963 to 2000. The purpose of this research and of the programme was to improve the quality and marketability of Canadian tobacco having regard to the desires and preferences of tobacco consumers.

29. In or about 1968 Agriculture Canada, at Delhi Research Station, initiated research into smoking and health issues by attempting to identify allegedly hazardous components in tobacco smoke.

30. In or about 1970, Agriculture Canada and the Federal Government established a committee on "less hazardous tobacco" in order to attempt to develop a cigarette capable of being marketed as "less hazardous" than alternative or pre-existing cigarettes.

31. Beginning in 1971, as one component of the "Less Hazardous Cigarette" programme, Agriculture Canada funded by the Federal Government began research into the development of less hazardous tobacco.

32. In or about 1977 and thereafter, the Federal Government publicized the results of its research.

33. The Delhi Research Station manufactured cigarettes from the tobacco varieties that it had developed for evaluation by various tobacco manufacturers including ITCAN.

34. The result of the Federal Government's tobacco development and production programme was that the Federal Government created by 1980 varieties of tobacco with a lower tar to nicotine ratio, which included Nordel, Delgold, Newdel and Candel which the Federal Government licensed and promoted for use by all growers of tobacco in Canada and which the Federal Government recommended for use by Canadian tobacco manufacturers including ITCAN.

35. The tobacco varieties so developed by the Federal Government became, by 1982, almost the only tobacco varieties available to the Canadian tobacco manufacturers and the tobacco products manufactured from the said varieties then became the tobacco products consumed in British Columbia. Thus the Federal Government's tobacco development and production programme reinforced the Federal Government's larger efforts to reduce the tar yields of cigarettes.

VII. REPRESENTATIONS AND ADVICE OF THE FEDERAL GOVERNMENT TO ITCAN

36. The Federal Government has made representations to ITCAN and provided it with advice in relation to matters now alleged to involve deceptive acts or practices.

37. The representations made by the Federal Government to ITCAN include the following:

- (a) that tar and nicotine measuring standards provided accurate information to consumers on which consumers could make informed smoking decisions;
- (b) that deliveries of tar and nicotine to smokers of "Light" and "Mild" cigarettes are reduced relative to regular cigarettes;

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- (c) that "Light" and "Mild" cigarettes would reduce the incidence of tobacco related diseases in the population of smokers;
- (d) compensation, to the extent it occurs is partial and temporary; and
- (e) consumption of lower tar cigarettes reduces the risk of contracting tobacco related diseases.

38. The Federal Government, drawing upon its expertise in smoking and health matters, provided advice to ITCAN as follows:

- (a) that "Light" and "Mild" products should be developed and marketed by the tobacco companies;
- (b) that machine tested tar and nicotine yields of cigarettes should be published to consumers having regard to the fact that those numbers do not and could not reflect actual intake by individual smokers;
- (c) that the tar and nicotine measuring standards provided accurate information to consumers which consumers could use to make informed smoking decisions and compare brand information;
- (d) compensation, to the extent it occurs, is partial and temporary; and
- (e) that the use of "Light" and "Mild" cigarettes by continuing smokers would reduce the incidence of tobacco related disease.

39. ITCAN, deferring to the expertise of the Federal Government in smoking and health matters, relied upon the representations and advice provided by the Federal Government.

VIII. THE SUPERVISION AND REGULATION OF ITCAN BY THE FEDERAL GOVERNMENT

40. At material times, the right to manufacture, promote and distribute cigarettes, including "Light" and "Mild" cigarettes was authorized and sanctioned by the Federal

Government and ITCAN's activities were monitored, and directed by it. In material matters, ITCAN acted on the advice and at the request of the Federal Government.

41. The Federal Government also monitored ITCAN's advertising, marketing and promotional activities in relation to "Light" and "Mild" cigarettes to ensure they complied with its overall objectives and health programmes.

42. Through its advice to, requests and direction of ITCAN, the Federal Government has defined the standards applicable to ITCAN's communications with its consumers. The Federal Government has monitored and directed ITCAN in matters relating to smoking and health and has requested ITCAN to act in certain ways or refrain from acting in certain ways now alleged by the Plaintiff to be deceptive acts or practices under the *Trade Practice Act*, R.S.B.C. 1996, c. 457.

43. The Federal Government, in particular, defined and delineated the standard applicable to communications with consumers in relation to, *inter alia*:

- (a) the promotion, distribution and sale of cigarettes containing lower amounts of tar and nicotine as measured by standard testing methods;
- (b) what "health claims", if any, could or should be made by ITCAN to its consumers; and
- (c) what information should be disclosed to consumers about "Light" and "Mild" cigarettes including their tar and nicotine content when measured by standard testing methods.

I. THE FEDERAL GOVERNMENT COLLECTED TAXES ASSOCIATED WITH THE SALE OF "LIGHT" AND "MILD" CIGARETTES

44. At material times the purchase price of "Light" and "Mild" cigarettes has included Federal Government taxes. At material times a substantial component of the purchase price was made up of taxes.

PART TWO

IX. THE FEDERAL GOVERNMENT OWED DUTIES TO CONSUMERS

A. The Federal Government Owed a Duty of Care to Consumers in Negligence

45. The Federal Government had, at material times, a duty of care to individual consumers deriving from its public health responsibilities and its smoking and health programmes. Without limiting the generality of the foregoing, the Federal Government assumed a duty to the Plaintiff to take reasonable care in the development and implementation of its smoking and health initiatives and programmes.

46. The Federal Government has acknowledged, at material times, that it has a duty to smokers to implement programmes to ensure that they are adequately informed of the risks of smoking and the properties of cigarettes.

B. The Federal Government Owed a Duty to Consumers as a “supplier” within the Meaning of the *Trade Practice Act*

47. The Federal Government’s various programmes were intended to and did encourage continuing smokers to smoke cigarettes containing less tar and nicotine as measured by standard testing methods and to encourage them to switch to lower tar and nicotine cigarettes. In promoting the consumption by consumers of “Light” and “Mild” cigarettes over other kinds of cigarettes, the Federal Government was at material times a “supplier” within the meaning of the *Trade Practice Act* and accordingly owed consumers a statutory duty.

X. THE FEDERAL GOVERNMENT OWED DUTIES TO ITCAN AT COMMON LAW AND AT EQUITY

48. The Federal Government assumed a duty of care to ITCAN in giving advice, directions and making representations and requests to ITCAN, based on the Federal Government’s expertise in health related matters, which ITCAN acted on or complied with.

49. The Federal Government knew or ought to have known that ITCAN was reasonably relying on its advice, direction, requests and representations and that it was deferring to the Federal Government’s expertise in matters of public health.

XI. ITCAN COMMITTED NO DECEPTIVE ACTS OR PRACTICES

50. ITCAN says that the Federal Government defined the duties and set the standard applicable to ITCAN's communications with consumers and that in complying with those duties and standards it committed no deceptive acts or practices within the meaning of the *Trade Practice Act* as alleged or at all.

51. The conduct of ITCAN in researching, developing and designing "Light" and "Mild" cigarettes complied with the duties defined by and the standards set by the Federal Government. Furthermore, those standards did not breach any duties owed to consumers.

52. The monitoring, supervision and requests of the Federal Government set the standards to be met by ITCAN in its promotional and marketing practices in relation to "Light" and "Mild" cigarettes and in complying with those standards ITCAN committed no deceptive acts or practices. The publishing by ITCAN of tar and nicotine yields as measured by standard testing methods at the request of the Federal Government complied with standards set by the Federal Government and ITCAN did not commit any deceptive acts or practices as alleged or at all. The standards referred to herein were reasonable in all the circumstances.

XII. IN THE ALTERNATIVE, THE FEDERAL GOVERNMENT BREACHED ITS DUTIES TO CONSUMERS**A. The Federal Government Breached the Standard of Care in Negligence**

53. If certain allegations in the Statement of Claim are correct, which is denied, and consumers were misinformed about the properties of "Light" and "Mild" cigarettes and the health risks of smoking "Light" and "Mild" cigarettes, then the Federal Government breached the standard of care in the operation of its health programmes and its programme to provide accurate information to consumers and its conduct or fault caused or contributed to damages allegedly suffered by the Plaintiff. If certain allegations in the Statement of Claim are correct, ITCAN says as follows:

- (a) Consumers in British Columbia relied on the Federal Government for accurate information about the purpose of standard testing methods and

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the use to which could be put information about the tar and nicotine deliveries of cigarettes as measured by standard testing methods.

- (b) Consumers in British Columbia relied on the Federal Government for accurate information about the health risks of smoking generally and the risks of smoking "Light" and "Mild" cigarettes. If consumers were misinformed about the health risks of smoking it was because the Federal Government negligently failed to provide adequate information to consumers or misrepresented information to them.
- (c) The Federal Government promoted "Light" and "Mild" cigarettes over higher tar and nicotine cigarettes as measured by standard testing methods. If cigarettes containing low tar and nicotine are not associated with the reduced incidence of tobacco related diseases in the population of smokers this fact was known or ought to have been known to the Federal Government and it negligently promoted "Light" and "Mild" cigarettes.
- (d) The Federal Government published and encouraged the publication of tar and nicotine and other smoke constituent yields as measured by standard smoking methods. If the publication of such information misinformed or misled consumers of the properties of "Light" and "Mild" cigarettes and the health risks of smoking them, then that is because of conduct of fault of the Federal Government and it knew or ought to have known that consumers would be misled.

54. If certain allegations in the Statement of Claim are correct, which is denied, ITCAN claims contribution and indemnity pursuant to the *Negligence Act*, RSBC, 1996, c. 333 measured to the extent of any liability of ITCAN to the Plaintiff.

B. The Federal Government Committed Deceptive Acts or Practices

55. If certain allegations in the Statement of Claim are correct, which is denied, and consumers were misinformed about the properties of "Light" and "Mild" cigarettes and the health risks of smoking "Light" and "Mild" cigarettes, then the Federal Government engaged in

deceptive acts or practices under the *Trade Practice Act* in developing its health programmes and its conduct of fault caused or contributed to damages allegedly suffered by the Plaintiff.

56. ITCAN repeats paragraph 53 to above.

57. If certain allegations in the Statement of Claim are correct, which is denied, ITCAN claims contribution and indemnity pursuant to the *Negligence Act*, RSBC, measured to the extent of any liability of ITCAN to the Plaintiff.

XIII. IN THE ALTERNATIVE, THE FEDERAL GOVERNMENT IS LIABLE TO ITCAN FOR BREACH OF DUTY OWED TO ITCAN

58. The Federal Government knew or ought to have known that ITCAN would reasonably rely on its advice and would comply with its direction or requests respecting the development, marketing and promotion of "Light" and "Mild" cigarettes. Without limiting the generality of the foregoing, the Federal Government knew or ought to have known that ITCAN would reasonably rely on its advice and directions in relation to those matters particularized in paragraphs 37 and 38 herein.

59. It is alleged that ITCAN committed deceptive acts or practices in relation to those matters respecting which the Federal Government provided ITCAN with direction, advice and regulatory directives.

60. It was reasonably foreseeable to the Federal Government that ITCAN could come under statutory liability if in acting on the representations and following the advice of the Federal Government, it breached duties to consumers in relation to "Light" and "Mild" cigarettes.

61. If certain allegations in the Statement of Claim are correct, which is denied, then the representations made by the Federal Government in furtherance of its smoking and health programme were false and were made negligently and in breach of the duty of care owed to ITCAN whereby ITCAN has suffered loss and damage measured by the extent of any liability to the Plaintiff.

XIV. IN THE ALTERNATIVE, THE FEDERAL GOVERNMENT IS LIABLE TO ITCAN FOR EQUITABLE INDEMNITY

62. ITCAN at material times acted at the request of the Federal Government. The requests or recommendations made by the Federal Government involved ITCAN acting in a manner that was not manifestly tortious or apparently illegal to ITCAN. If in so doing it comes under a liability to the Plaintiff, the Federal Government is required to indemnify ITCAN to the extent of the liability so incurred.

63. Further, only a small portion of the purchase price of "Light" and "Mild" cigarettes consists of moneys payable to ITCAN. The majority of the purchase price has, at material times, consisted of taxes levied by both the Provincial and the Federal Government. In these circumstances, the Federal Government is liable to ITCAN in equity to indemnify ITCAN to the extent of any liability of ITCAN to the Plaintiff for amounts received by the Federal Government in taxes.

WHEREFORE ITCAN claims against the Federal Government as follows:

- (a) A declaration that the Federal Government defined and mandated standards applicable to the publication by ITCAN of tar and nicotine yields as measured by standard testing methods;
- (b) A declaration that the Federal Government mandated and approved communications by ITCAN with consumers respecting the use of descriptors such as "Light" and "Mild" to describe brands of its cigarettes;
- (c) A declaration that ITCAN complied with the mandated and approved standards of the Federal Government in relation to "Light" and "Mild" cigarettes and thereby

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committed no deceptive acts or practices within the meaning of the *Trade Practice Act*;

- (d) A declaration that the Federal Government is a supplier within the meaning of the *Trade Practice Act*;
- (e) A declaration that the Federal Government owed purchasers of "Light" and "Mild" cigarettes duties of care to provide reliable information to consumers about the deliveries of tar and nicotine about the health risks associated with the use of "Light" and "Mild" cigarettes;
- (f) Alternatively, a declaration that the Federal Government breached its common law, equitable and statutory duties owed to purchases of "Light" and "Mild" cigarettes thereby causing or contributing to damage or loss to the Plaintiff in this action;
- (g) Alternatively, an award of contribution and indemnity pursuant the provisions of the *Negligence Act*;
- (h) Alternatively, a declaration that the Federal Government owed and breached duties to ITCAN;
- (i) Alternatively, damages against the Federal Government measured by the extent of any liability of ITCAN to the Plaintiff;
- (j) An Order that the Federal Government indemnify in whole or in part ITCAN to the extent of any liability of ITCAN to the Plaintiff;

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- (k) Costs; and
- (l) Such other relief as to this honourable court seems just.

IF YOU INTEND TO DEFEND this claim against you, or if you have a set off or counterclaim that you wish to have taken into account at the trial, **YOU MUST**

- (a) **GIVE NOTICE** of your intention by filing a form entitled "Appearance" in the above registry of this court, at the address shown below, within the Time for Appearance provided for below and **YOU MUST ALSO DELIVER** a copy of the Appearance to the Defendants' address for delivery, which is set out in this Third Party Notice, and
- (b) **FILE** a Statement of Defence in the above registry of this court within the Time for Defence provided for below and **DELIVER** a copy of the Statement of Defence to the Defendants' address for delivery.

YOU OR YOUR SOLICITOR may file the Appearance and the Statement of Defence. You may obtain a form of Appearance at the registry.

JUDGMENT MAY BE TAKEN AGAINST YOU IF

- (a) **YOU FAIL** to file the Appearance within the Time for Appearance provided for below, or
- (b) **YOU FAIL** to file the Statement of Defence within the Time for Defence provided for below.

TIME FOR APPEARANCE

If this notice is served on a person in British Columbia, the time for appearance by that person is 7 days from the service (not including the day of service).

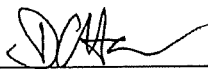
If this notice is served on a person outside British Columbia, the time for appearance by that person after service, is 21 days in the case of a person residing anywhere within Canada, 28 days in the case of a person residing in the United States of America, and 42 days in the case of a person residing elsewhere.

TIME FOR DEFENCE

A Statement of Defence must be filed and delivered to ITCAN's solicitors within 14 days after the end of the Time for Appearance provided for above.

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(1)	The ADDRESS OF THE REGISTRY is: 800 Smithe Street, Vancouver, B.C. V3M 1C9
(2)	The Defendant's ADDRESS FOR DELIVERY is: Suite 14 - 1075 West Georgia Street Vancouver, B.C. V6E 3C9 Fax number for delivery: n/a
(3)	The NAME and OFFICE ADDRESS of the Defendant's SOLICITORS are: Berardino & Harris Suite 14 - 1075 West Georgia Street Vancouver, B.C. V6E 3C9

Dated: April 29, 2004

Solicitors for Imperial Tobacco Canada
Limited

(Reference: D.C. Harris/030185)

This is Exhibit "G" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

We have archived this page and will not be updating it.

You can use it for research or reference.



Government
of Canada

Gouvernement
du Canada

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Competition Bureau Reaches Agreement with the Three Major Cigarette Manufacturers to Stop Using "light" and "mild" on Cigarette Packages

News Release

OTTAWA, November 9, 2006 -- At the request of the Competition Bureau, the three major cigarette manufacturers in Canada have agreed to accelerate the removal of the descriptors "light" and "mild", or variations thereof, from their cigarette packaging. Imperial Tobacco Canada Limited, Rothmans Benson & Hedges Inc. and JTI-Macdonald Corp. will each phase out these descriptors on affected brands and products, commencing no later than December 31, 2006 and ending no later than July 31, 2007. A total of 79 brands of cigarettes will be affected. Also affected will be 18 varieties of fine-cut tobacco.

"Through this action Canada joins other countries where cigarettes are no longer described as "light" or "mild", said Sheridan Scott, the

Commissioner of Competition. "Light, mild, and similar descriptors are no longer used in the European Union or in Australia".

"I am pleased that the tobacco companies have agreed to voluntarily discontinue use of these descriptors in advance of anticipated regulations requiring their removal," the Commissioner said.

A complaint was received by the Bureau concerning the use of "light" and "mild". The inquiry into the complaint will, therefore, be discontinued.

In addition to the three largest tobacco companies, there is also a number of smaller manufacturers in Canada who sell cigarettes described as "light" or "mild". The Commissioner will seek similar agreements from these firms to cease use of these descriptors.

The Competition Bureau is an independent law enforcement agency that promotes and maintains competition so that all Canadians can benefit from competitive prices, product choice and quality services. It oversees the application of the Competition Act, the Consumer Packaging and Labelling Act, the Textile Labelling Act and the Precious Metals Marking Act.

For media enquiries, please contact:

Maureen McGrath

Communications Advisor

Competition Bureau

819-953-8982, or 613-296-2187 (cell)

For general enquiries, please contact:

Information Centre

Competition Bureau

819-997-4282

1-800-348-5358

Search for related information by keyword


Innovation, Science and Economic Development Canada

Economics and Industry

Date modified:

2006-11-09

This is Exhibit "H" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

**REPORT
OF
DAVID HAMMOND Ph.D.**

**SUBMITTED IN:
KNIGHT VS. IMPERIAL TOBACCO LTD.**

JANUARY 25, 2017

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1. SUMMARY OF QUALIFICATIONS

As detailed in my CV, attached hereto as Exhibit A, I am an Associate Professor (tenured) in the School of Public Health & Health Systems at the University of Waterloo in Ontario, Canada. I received my B.A. in Psychology from the University of British Columbia (Canada) and my M.Sc. in Health Studies and Ph.D. in Psychology from the University of Waterloo (Canada). In addition, I have served since 2005 as an Affiliated Scientist at the Propel Centre for Population Health Impact (funded by the Canadian Cancer Society).

I serve on several prominent committees that help to steer cancer prevention and public health research in Canada, including the Prevention & Risk Reduction Committee for the Canadian Cancer Society, as well as the Council on Mission for the Heart & Stroke Foundation of Canada. In both positions, I provide strategic input into their chronic disease prevention strategy and research activities. I also serve on the Policy Committee for the Society for Research on Nicotine & Tobacco—the leading scientific organization in the area of tobacco research. One important function of this role is to coordinate submissions to the US Food & Drug Administration (FDA) “dockets”, which constitute the evidence base relied on by the FDA when drafting new regulations. I am an Assistant Editor of the journal *Tobacco Control*. I also serve on the scientific team for the US National Institutes of Health (NIH)/FDA-funded Population Assessment of Tobacco and Health (PATH) Study, which is one of the largest studies ever conducted to assess tobacco use and its consequences.

I have served as an Advisor to the World Health Organization (WHO) for tobacco packaging regulations under the WHO Framework Convention on Tobacco Control (FCTC). In this capacity, I had the opportunity to draft treaty guidelines that now influence regulatory practice in countries throughout the world. I have also represented civil society in the WHO FCTC Working Group on tobacco product testing and regulations, which is tasked with establishing testing and regulatory guidelines for the 180 countries that have ratified the treaty. I have also served as a consultant on tobacco control regulations in a number of countries, including for Health Canada, the UK Department of Health, the Commonwealth of Australia, the US Centers for Disease Control and Prevention (CDC), the European Commission, and others. To date, my research has been cited in regulatory reviews and consultation papers from well over a dozen countries. For example, I was invited to testify to the European Parliament on the development of the new Tobacco Products Directive, which established regulations for tobacco products in all 27 member states. I have also been invited to testify to the Canadian Parliament Standing Committee on Health regarding nicotine products and “e-cigarettes,” as well as other legislative bodies on issues related to tobacco use.

I have published more than 200 peer-reviewed journal articles, including as lead author in journals such as *The Lancet*, the *Canadian Medical Association Journal*, *Cancer Epidemiology, Biomarkers & Prevention*, and the *American Journal of Public Health*. According to a recent review, my publications place me in the top 10 most-published authors in the field of tobacco control over the past 50 years.

I have contributed to high-profile works for leading international health agencies. These include serving as a contributing author of the 2012 US Surgeon General’s Report, *Preventing Tobacco Use Among Youth and Young Adults*, monographs for the International Agency for Research on Cancer (IARC) on the impact of tobacco control policies, World Health Organization reports, and reports for the US Institute of Medicine (IOM). I am an author on

more than 200 peer-reviewed conference presentations at scientific conferences, and I have given more than 70 invited talks, including high profile talks to leading academic institutions, international scientific and health organizations.

To date, I have been an Investigator on more than 50 research grants and contracts, totaling more than \$60 million CAD. In the past five years, I have received grants as a Principal Investigator from the Canadian Institutes of Health Research (CIHR), the US National Institutes of Health (NIH), the Canadian Cancer Society Research Institute, the Public Health Agency of Canada, and Health Canada. Currently, I hold more than \$30 million in active grant funding as a Principal or Co-Investigator.

My work has been recognized with several awards, including the *Canadian Medical Association Journal's Top Canadian Achievements in Health Research Awards* in 2009, for my work with Dr. Geoffrey Fong and Dr. Mary Thompson on the International Tobacco Control policy evaluation project, which consists of cohort studies in 20 low-, middle- and high-income countries. I have also received the *William E. Rawls Prize* from the Canadian Cancer Society for important advances in cancer control, as well as the *Lise Manchester Award* from the Royal Statistical Society of Canada for statistical methods to study matters of relevance to society. I have also received prestigious awards from the Society for Research on Nicotine & Tobacco—the leading society within my area of research—as well as *Canada's Premier Young Researcher Award*, from the Canadian Institutes of Health Research, and in 2016 I was inducted into the College of the Royal Society of Canada. I currently hold an *Applied Chair in Public Health* from the Canadian Institutes of Health Research and the Public Health Agency of Canada, a prestigious award given to only 14 researchers in Canada, which provides \$925,000 to support my research program.

Over the past ten years, I have conducted more than 300 media interviews related to my research program. Coverage of my work has been featured in international media outlets, such as the New York Times, CNN, the BBC, The Economist, China Daily, and others.

My research in the area of tobacco use involves collaborations with experts from a range of disciplines in over 20 different countries, including low- and middle-income countries. In the course of my scholarly research, teaching, and consulting work, I have conducted research on, among other things, smoking behaviour, consumer perceptions of 'light' cigarettes, tobacco product design, cigarette emissions testing, smoking compensation, smoking cessation, tobacco advertising and marketing, and risk communication.

The opinions expressed in this report are based on my own empirical research from the following sources:

- Original data from my own research;
- Published scientific articles;
- Official reports from governments and public health agencies (e.g., Health Canada, U.S. Surgeon General's Reports, Institute of Medicine reports, etc.) on tobacco and health;
- Public reports, public statements, and marketing materials authored by cigarette companies;

- Well in excess of 10,000 internal documents from cigarette companies, and their affiliated organizations, accessible through the Legacy Tobacco Documents Library¹ or identified through publication on the Internet, through the press, in scientific journals, or through litigation; and,
- Expert reports prepared for legal proceedings, including witness testimony on behalf of tobacco companies, governments, and plaintiffs in class action suits.

The opinions in this report are held to a reasonable degree of scientific and professional certainty, and I reserve the right to supplement opinions based on new information and materials.

2. STATEMENT OF DUTY

I am aware of my duty to:

- Assist the court and not be an advocate for any party:
 - to provide opinion evidence that is objective and non-partisan;
 - to provide opinion evidence that is related only to matters that are within my professional area of expertise;
 - to provide any additional assistance that the court may reasonably require to determine a matter in issue.
- I have made my report in conformance the above duty. I will, if called on to give oral or written testimony, give that testimony in conformity with this duty.

3. SUMMARY OF OPINIONS

The following is a summary of my opinions in regards to the current proceedings:

- Tobacco companies developed 'low tar' cigarettes marketed 'light' cigarettes to reassure 'health concerned' smokers.
- 'Light' cigarettes were engineered with design features such as 'filter ventilation' to generate low tar and nicotine numbers under machine smoking, but to provide higher levels of tar and nicotine when smoked by consumers.
- Smokers 'compensate' for the design of 'light cigarette' to maintain nicotine intake.

¹ Legacy Tobacco Documents Library. Available at: <http://legacy.library.ucsf.edu/>

- 'Light' cigarettes do not reduce consumer exposure to tar and nicotine, and are equally or more harmful than 'regular', 'higher tar' cigarettes.
- 'Light' cigarettes were marketed in ways that promoted the false belief that these brands were less harmful.
- 'Light' cigarettes reduced quitting among smokers who otherwise would have quit due to health concerns.
- Many consumers continue to hold false beliefs that 'light' cigarettes are less harmful, even after the terms 'light', 'mild', and 'low tar', were removed from packages.

4. WHAT ARE LIGHT CIGARETTES?

DESIGN OF LIGHT CIGARETTES

Cigarette smoke contains more than 7,000 compounds.² At least 250 of these compounds are known to be harmful, including 70 carcinogens, such as benzene, benzo[a]pyrene, formaldehyde, and heavy metals, such as cadmium and chromium, as well as a range of other toxicants, such as carbon monoxide, ammonia, acetone, and hydroquinone, and nitrogen oxides.^{3,4,5}

The total particulate matter of these compounds is collectively known as 'tar'.⁶ While some chemical compounds in cigarette smoke are present in unburned tobacco (such as nicotine), many are by-products from burning. Therefore, tar can only be measured in tobacco smoke. Tar is measured using a machine which collects smoke from cigarettes using a standardised puffing protocol across all product types. The machine smoking protocol provides the basis for the tar and nicotine numbers used by manufacturers and consumers since the 1930s.⁷ The amount of tar in a cigarette is determined by the tobacco contents and additives, but also by the way in which the cigarette is 'smoked' in the machine.

In response to growing concerns about the health risks of cigarettes in the 1950s, tobacco manufacturers changed the way cigarettes were engineered to reduce the machine-measured tar levels.⁸ First, companies began selling cigarettes with filters, with very rapid uptake among consumers: in 1955, less than 10% of cigarettes in Canada had a filter; however, by 1969, more than 80% of cigarettes were sold with filters.⁹

² 1) US Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease, A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2010. 2) US Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014.

³ International Agency for Research on Cancer (IARC). Tobacco Smoking. IARC Monogr Eval Carcinog Risks Hum 2012; 100E. Available at: <http://monographs.iarc.fr/ENG/Monographs/vol100E/mono100E-6.pdf>

⁴ International Agency for Research on Cancer (IARC). Tobacco smoke and involuntary smoking. IARC Monogr Eval Carcinog Risks Hum 2004; 83: 1–1438. Available at: <http://monographs.iarc.fr/ENG/Monographs/vol83/mono83.pdf>

⁵ 1) US Department of Health and Human Services. *The Health Consequences of Smoking, A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004. 2) US Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease, A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2010.

⁶ Tar refers to the total particulate matter after nicotine and water are removed.

⁷ 1) Ogg CL. Determination of particulate matter and alkaloids (as nicotine) in cigarette smoke. *Journal of the Association of Official Agricultural Chemists* 1964; 47: 356. 2) Pillsbury HC. Review of the Federal Trade Commission method for determining cigarette tar and nicotine yield. In: Shopland DR, Burns DM, Benowitz NL, Amacher RH, editors. *NCI smoking and tobacco control monograph 7: risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine*. Bethesda, MD: US Dept of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute; 2001. p. 9-14.

⁸ Kozlowski L, O'Connor RJ, Sweeney CT. Cigarette Design. In: *Risks Associated with Smoking Cigarettes with Low Machine- Measured Yields of Tar and Nicotine*. U.S. Department of Health and Human Services. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Services, National Institutes of Health; National Cancer Institute; 2001. p. 13-35.

⁹ 1) Canadian Facts Co. Limited. Study No. 4. Canadian smoking habits and smokers attitudes toward major cigarette brands, July-August 1955 8M. 1955 September 21. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/kkmv0223>. Bates: D21645. Page 6. 2) Canadian Advertising Agency. NO TITLE. 1969 May 14. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/gpvn0223>. Bates: D296042. Page 10. 3) Market Research Department. *The Canadian Tobacco Market at a Glance - December 1991*. 1991 December. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/lphb0223>. Bates: D604569. Page 8.

Efforts to reduce the machine-measured tar yields accelerated over the following years as consumers' health concerns continued to increase. 'Filter ventilation' was the primary design change used to lower machine-measured tar levels over this period.^{10,11,12,13} Filter ventilation is achieved by cutting small holes into the paper wrapping around the filter. These "ventilation" holes were positioned so that air would enter the filter and dilute the smoke that was collected by the testing machines. The result was that the machines collected more air and less smoke with each puff, and lower tar numbers were generated.¹⁴ Some brands achieve filter ventilation levels of up to 90%, meaning that each puff drawn by the machine includes 90% air and only 10% smoke. The widespread adoption of filter ventilation and other design changes succeeded in reducing the average machine-measured tar levels more than 44% between 1968 and 1997.^{15,16}

'LIGHT' CIGARETTES & SMOKING COMPENSATION

While filter ventilation and other design changes reduced machine-measured tar and nicotine numbers, they also changed how cigarettes were smoked: a phenomenon known as smoker 'compensation'. Nicotine-dependent smokers attempt to maintain a relatively constant level of nicotine in their bodies and change their smoking behavior to regulate this level.^{17,18,19,20} Smokers do so by varying the number of cigarettes they smoke, as well as the amount of smoke they inhale from each cigarette. As a result, 'lower tar' cigarettes with higher levels of filter ventilation are smoked more intensely: smokers of lower tar cigarettes take larger puffs, more puffs per cigarette, and puffs with greater flow rates than smokers of 'higher tar' cigarettes.^{21,22,23,24,25,26} Given that the average

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- ¹⁰ U.S. Department of Health and Human Services. Risks Associated with Smoking Cigarettes with Low Machine- Measured Yields of Tar and Nicotine. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Services, National Institutes of Health; National Cancer Institute, 2001.
- ¹¹ Kozlowski LT, O'Connor RJ. Cigarette filter ventilation is a defective design because of misleading taste, bigger, puffs, and blocked vents. *Tob Control* 2002;11(Suppl 1):i40-i50.
- ¹² Kozlowski LT, Mehta NY, Sweeney CT, Schwartz SS, Vogler GP, Jarvis MJ, West RJ. Filter ventilation and nicotine content of tobacco in cigarettes from Canada, the United Kingdom, and the United States. *Tob Control* 1998; 7(4):369-75.
- ¹³ O'Connor RJ, Hammond D, McNeill A, King B, Kozlowski LT, Giovino GA, Cummings KM. How do different cigarette design features influence the standard tar yields of popular cigarette brands sold in different countries? *Tob Control* 2008; 17 (Suppl 1): i1-i5.
- ¹⁴ 1) US Department of Health and Human Services. Risks Associated with Smoking Cigarettes with Low Machine- Measured Yields of Tar and Nicotine. Bethesda, MD: US Department of Health and Human Services, Public Health Services, National Institutes of Health; National Cancer Institute; 2001. 2) Kozlowski LT, O'Connor RJ. Cigarette filter ventilation is a defective design because of misleading taste, bigger, puffs, and blocked vents. *Tob Control* 2002;11(Suppl 1):i40-i50.
- ¹⁵ Hoffmann D, Djordjevic MV, Brunneemann KD. Changes in cigarette design and composition over time and how they influence the yields of smoke constituents. In: The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes. Report of the NCI Expert Committee. Smoking and Tobacco Control Monograph No. 7. U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, NIH Publication No. 96-4028; 1996. p. 15-37.
- ¹⁶ 1) Imperial Tobacco Limited. The Canadian Tobacco Market at a Glance. 1989 April. <https://industrydocuments.library.ucsf.edu/tobacco/docs/kgjn0209>. Bates: 303541912-303541963. 2) Unknown. Response of the market and of imperial tobacco to the smoking and health environment. 1978 May. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/shhb0223>. Bates: D594360.
- ¹⁷ 1) Benowitz NL. Compensatory smoking of low-yield cigarettes. Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine. Bethesda, MD: National Institutes of Health, 2001:39-64. 2) Jarvis MJ, Boreham R, Primatesta P, et al. Nicotine yield from machine-smoked cigarettes and nicotine intakes in smokers: evidence from a representative population survey. *J Natl Cancer Inst* 2001;93:134-8.
- ¹⁸ Ayres Cl. The BAT stance on compensation. British-American Tobacco Company Limited. Proceedings of the Smoking Behaviour-Marketing Conference 840709-840712 Session III. 9 Jul 1984. Brown & Williamson. Bates No. 536000308/0507. <http://legacy.library.ucsf.edu/tid/oli24f00>
- ¹⁹ Creighton DE. Compensation for Changed Delivery Report No. RD. 1300 Restricted. 30 Jan 1976. Brown & Williamson. Bates No. 650008449/8480. <http://legacy.library.ucsf.edu/tid/oky14f00>
- ²⁰ Wade RS. Compensation by Smokers for Changes in Cigarette Smoke Composition [Letter from R.S. Wade to D.G. Felton]. 24 Mar 1972. British American Tobacco Company. Bates No. 302057573/7574. <http://www.library.ucsf.edu/tobacco/batco/html/8600/8662/index.html>
- ²¹ Bridges RB, Combs JG, Humble JW, Turbek JA, et al. Puffing topography as a determinant of smoke exposure. *Pharmacology Biochemistry & Behavior* 1990; 37, 29-39.

smoker consumes only 30% of the available tobacco in each cigarette, compensation is a fairly straightforward task: smokers can double their nicotine intake simply by reducing the time in between puffs.²⁷ In most cases, smoking compensation occurs unconsciously, as smokers regulate their nicotine intake in response to the sensory cues of smoking and the immediate pharmacological effects of nicotine.

Compensation is facilitated by the fact that all cigarettes contain ample nicotine to facilitate smoker compensation. The amount of nicotine in the unburned tobacco of cigarettes stayed relatively constant over the same period that nicotine emissions dropped by more than 40%.²⁸ Indeed, most 'lower tar' cigarettes contain the same tobacco blend and nicotine level as 'higher tar' cigarettes.²⁹ Overall, the lower tar and nicotine numbers were primarily the result of how cigarettes performed under machine testing, rather than reductions in chemical compounds of the tobacco itself. As industry scientists explained, the idea was, "...to produce a cigarette which can be machine smoked at a certain tar band, but which, in human hands, can exceed this tar banding."³⁰ Thus, the design of 'light' cigarettes gave the appearance that tar and nicotine levels were being reduced, while ensuring that cigarettes still contained ample nicotine to promote and sustain addiction.^{31,32,33,34}

'LIGHT' AND 'LOW TAR' CIGARETTES ARE NOT LESS HARMFUL

As a result of smoker compensation, the machine-measured tar and nicotine numbers are poor predictors of actual exposure or 'intake' among smokers: consumers of 'lower tar' cigarettes exhibit the same levels of chemical exposure as consumers of conventional or 'higher tar' cigarettes.³⁵ Population-based studies using

²² Benowitz N. Compensatory smoking of low-yield cigarettes. In: *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine*. U.S. Department of Health and Human Services. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Services, National Institutes of Health; National Cancer Institute; 2001. p. 39-63.

²³ Ahijevych K, Gillispie J. Nicotine dependence and smoking topography among black and white women. *Research In Nursing & Health* 1997; 20: 505-514.

²⁴ Hecht SS, Murphy SE, Carmella SG, et al. *Journal of the National Cancer Institute* 2004; 96: 107-115.

²⁵ Kozlowski LT, O'Connor RJ. Cigarette filter ventilation is a defective design because of misleading taste, bigger puffs, and blocked vents. *Tobacco Control* 2002;11(Suppl 1):i40-150.

²⁶ Hammond D, Fong GT, Cummings KM, Hyland A. Smoking Topography, Brand Switching, and Nicotine Delivery: An In Vivo trial. *Cancer Epidemiology, Biomarkers, & Prevention* 2005;14 (6):1-6.

²⁷ Unknown author. *The Design of Cigarettes: course outline*. 1982 April 26. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/slgf0092> Bates: 511360043-511360551

²⁸ Hoffmann D, Djordjevic MV, Brunnemann KD. Changes in cigarette design and composition over time and how they influence the yields of smoke constituents. In: *The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes*. Report of the NCI Expert Committee. Smoking and Tobacco Control Monograph No. 7. U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, NIH Publication No. 96-4028; 1996. p. 15-37.

²⁹ Hammond D, O'Connor RJ. Chemical constituents and smoke emissions from Canadian cigarettes. *Tobacco Control* 2008; 17;124-131.

³⁰ Grieg CC BAT Southampton. Structured creativity group—marketing scenario. Undated. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/tpcl0136> Bates: 178040169-178040180.

³¹ Smoking and tobacco control monograph No. 7. National Cancer Institute (U.S.). *The FTC cigarette test method for determining tar, nicotine, and carbon monoxide yields of US cigarettes: report of the NCI Expert Committee* Bethesda, Maryland: National Institutes of Health (NIH Publication No 96-4028;1996. p.151-60.

³² Kozlowski LT, O'Connor RJ. Official cigarette tar tests are misleading: use a two-stage, compensating test. *The Lancet* 2000; 355: 2159-2161.

³³ Henningfield JE, Kozlowski LT, Benowitz NL. A proposal to develop meaningful labelling for cigarettes. *JAMA* 1994; 272: 312-314.

³⁵ 1) Benowitz NL. Compensatory smoking of low-yield cigarettes. In: *National Cancer Institute. Smoking and Tobacco Control Monograph No 13: Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine*. Bethesda, MD: National Institutes of Health; 2001. p. 39-64. 2) Jarvis MJ, Boreham R, Primatesta P, et al. Nicotine yield from machine-smoked cigarettes and nicotine intakes in smokers: evidence from a representative population survey. *J Natl Cancer Inst* 2001;93:134-8.

biomarkers of exposure demonstrate that nicotine intake among cigarette smokers has not changed over the past 25 years, despite the market-wide shift to 'light' cigarettes.³⁶

Epidemiological studies have confirmed that 'light' or 'lower tar' cigarettes do not reduce the risk of smoking.^{37,38,39,40} In fact, in 2014, the US Surgeon General's report concluded that the relative risk of dying from cigarette smoking has increased over the last 50 years, and that the increased risk is due to "changes in the design and composition of cigarettes since the 1950s."⁴¹ In other words, by promoting deeper levels of inhalation due to more dilute smoke, 'light' cigarettes are associated with greater, not lesser harm.

Internal documents from tobacco industry scientists in the 1970s foreshadowed the epidemiological data that would emerge decades later. Confidential research conducted by Imperial Tobacco Ltd (ITL) and other companies demonstrated that smokers of 'lower tar' cigarettes were receiving substantially higher deliveries than the tar and nicotine numbers would suggest.^{42,43,44,45,46,47,48} In 1978, Dr. F. J. Roe, a senior medical consultant to BAT, warned about the increased risk to consumers: "Perhaps the most important determinant of the risk to health or to a particular aspect of health is the extent to which smoke is inhaled by smokers. If so, then deeply inhaled smoke from low tar delivery cigarettes might be more harmful than uninhaled smoke from high tar cigarettes."⁴⁹

³⁶ Jarvis MJ, Giovino GA, O'Connor RJ, Kozlowski LT, Bernert JT. Variation in nicotine intake among U.S. cigarette smokers during the past 25 years: evidence from NHANES surveys. *Nicotine Tob Res* 2014;16(12):1620-8.

³⁷ 1) Harris JE, Thun MJ, Mondul AM, Calle MEE. Cigarette tar yields in relation to mortality from lung cancer in the cancer prevention study II prospective cohort, 1982-88. *BMJ* 2004;328:72-80. 2) Djordjevic MV, Stellman SD, Zang E. Doses of nicotine and lung carcinogens delivered to cigarette smokers. *J Natl Cancer Inst* 2000;92:106-11.

³⁸ National Cancer Institute. Smoking and Tobacco Control Monograph No 13: Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine. Report of the NCI Expert Committee. Bethesda, MD: National Institutes of Health; 2001.

³⁹ World Health Organization Study Group on Tobacco Product Regulation. The scientific basis of tobacco regulation: second report of a WHO study group. WHO Technical Report Series No. 951. Geneva: World Health Organization.

⁴⁰ US Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

⁴¹ US Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Page 8 & 642.

⁴² Dunn PJ, Frelesleben ER. The Use of the Freiri Slave Smoker to Investigate Changes in Smoking Behaviour: Part I. 3 Mar 1975. Brown & Williamson. Bates No. 650007446/7479. <http://legacy.library.ucsf.edu/tid/dss00f00>

⁴³ Hammond D, Collishaw N, Callard C. Tobacco industry research on smoking behaviour and product design. *The Lancet* 2006; 367: 781-87.

⁴⁴ Smith TA. Compensation by Smokers for Changes in Cigarette Smoke Composition. 1972 March 24. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/yjdl0214> Bates: 302057575/7579.

⁴⁵ Dunn PJ, Frelesleben ER. The Use of the Freiri Slave Smoker to Investigate Changes in Smoking Behaviour: Part I. 1975 March 03. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/fqyy0131> Bates: 650007449.

⁴⁶ Grieg CC, BAT Southampton. Structured creativity group—marketing scenario. Undated. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/tpcl0136> Bates: 178040169-178040180.

⁴⁷ McBride C. Imperial Tobacco Limited. Further investigations of smoker-product interactions. 1986 January 23. <https://industrydocuments.library.ucsf.edu/tobacco/docs/lqxj0141> Bates: 570551110-570551170.

⁴⁸ 1) Phillip Morris Tobacco Company. (1983, June 26). Human smoking behavior. Phillip Morris. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=yfmx0045> Bates: 2500126796-2500126862 2) Phillip Morris Tobacco Company. (1994, April 6). Phillip Morris research on nicotine pharmacology and human smoking behavior. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=kfhx0005> Bates: 2046819241-2046819275.

⁴⁹ Roe FJ. Integrated League Tables. 6 Jan 1978. British American Tobacco. Bates No. 110083881/3889. <http://www.healthservices.gov.bc.ca/guildford/html/109/00011033.html>

MARKETING OF 'LIGHT CIGARETTES'

Light cigarettes were defined as much by how they were marketed as by their product design.⁵⁰ In the 1970s 'lower tar' cigarettes were branded as 'light' and 'mild' cigarettes. *Marlboro*—the most popular cigarette brand in the world—was the first to introduce a 'light' extension in 1972. The Canadian market followed suit shortly thereafter: between 1976 and 1978, 'light' and 'mild' brand extensions were introduced for most major Canadian brands, including *Players*, *Export A*, *Craven A*, *Belvedere*, *Rothmans*, *du Maurier*, *Benson & Hedges*, and *Number 7*.⁵¹ The proliferation of 'light' brands was so sudden that the industry subsequently referred to 1977 as the 'Year of Lights':

*Lower 'tar' and nicotine cigarettes, of which no less than seven new brands were launched during 1977, obtained a fantastic success amongst Canada's six million smokers, thereby consolidating a trend which had begun to develop during 1976. Their sudden, spectacular success had a marked effect on the smoking preferences of millions of Canadians...*⁵²

Prior to 1976, 'lower tar' cigarettes were marketed as separate 'brand families', such as *Viscount*. In contrast, most 'light' and 'mild' brands were 'line extensions' of pre-existing brands. For example, *Player's Light* was a line extension of the *Player's* brand. Brand extensions had the benefit of using the established imagery and associations of the original brand. 'Light' brand extensions provided smokers with the reassurance of switching to a lower tar cigarette, while staying within their existing brand family. An ITL presentation in 1980 described the general marketing strategy behind 'light' brand extensions: "...with the current smoking & health concerns, provide the consumer with an option other than quitting - switch to something milder but which still offers the traditional values of his current brand."⁵³

Marketing was critically important to promoting the consumer perception that "light" cigarettes were less harmful. Companies avoided direct or explicit statements of reduced harm: companies were concerned about potential liability and consumer perceptions as they had yet to acknowledge that smoking caused disease. Instead, marketing strategies focused on the concept of 'lightness' and 'mildness' as euphemisms for less harmful cigarettes. Virtually all 'lower tar' brand extensions launched in 1977 and afterwards incorporated the terms 'light' or 'mild' in their brand names based on consumer research indicating that smokers associated these terms with reduced harm.⁵⁴ Advertisements for 'light' cigarettes used health-related imagery and symbols, and often

⁵⁰ Please note that use of the term 'light' in this report also refers to other 'low tar' brands marketed with terms such as 'mild' and similar descriptors.

⁵¹ 1) Imperial Tobacco Limited. *The Canadian Tobacco Market at a Glance*. 1989 April. [Collection]. <https://industrydocuments.library.ucsf.edu/tobacco/docs/kgjn0209>. Bates: 303541912-303541963. 2) UNKNOWN. *RESPONSE OF THE MARKET AND OF IMPERIAL TOBACCO TO THE SMOKING AND HEALTH ENVIRONMENT*. 1978 May. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/shhb0223>. Bates: D594360.

⁵² Descoteaux, M. *Review of the tobacco industry*. 1978 March 17. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/srkv0223>. Bates: D86756.

⁵³ Imperial Tobacco Limited, Bedard M, Woods J. *Marketing vs smoking/health issues in Canada*. 1980 October. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/rskv0223>. Bates: D9069. Page 43.

⁵⁴ 1) Woods J. *36 Entrevues trojan - test de produit 3 questions supplementaire*. 1977 January. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/jmmv0223>. Bates: D22453. Page 2. 2) Wood J. *Small questionnaire concerning French advertising for trojan la plus faible vs. la plus douce*. 1977 February 04. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/kmmv0223>. Bates: D22455. Page 2. 3) Unknown. *Project Gatawick*. 1974 September 04. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/xjwb0223>. Bates: D5633. Page 3.

featured references to 'low tar'.⁵⁵ Cigarette pack designs also reinforced brand imagery by using lighter colours for 'lower tar' brands and darker colours for 'full flavour' or 'higher tar' brands to convey relative harm.⁵⁶ As restrictions on traditional advertising increased, the brand imagery on packaging became more important in positioning light cigarettes as less harmful.⁵⁷

These marketing strategies acted synergistically with the physiological sensory experience of smoking 'light' cigarettes to promote the false belief that low-tar cigarettes were less harmful. Because the smoke from 'light' cigarettes is diluted by air entering through the filter vents, lower tar cigarettes actually produce a 'lighter', less harsh taste when inhaling smoke.⁵⁸ For consumers, the 'lighter' sensory perceptions are perceived as physiological validation of the information conveyed in marketing messages and lower tar numbers: 'light' cigarettes must be less harmful because they could taste the difference. Indeed, many consumers use the taste or 'strength' of a brand as an indicator of its relative level of harm.⁵⁹

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- ⁵⁵ E.g., 1) Pollay RW1, Dewhirst T. The dark side of marketing seemingly "Light" cigarettes: successful images and failed fact. *Tob Control* 2002;11 Suppl 1: i18-31. 2) Pollay, R. and Dewhirst, T., Marketing cigarettes with low machine-measured yields in: *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine, Smoking and Tobacco Control Monograph No. 13*, US Department of Health and Human Services, National Institutes of Health, National Cancer Institute (2001), pp. 217-219. 3) Pollay RW. Targeting youth and concerned smokers: evidence from Canadian tobacco industry documents. *Tob Control* 2000;9(2):136-47. 4) Market Facts Incorporated. 1977 Segmentation of the French and English Speaking Canadian Cigarette Markets. 1977 June. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fnk0223>. Bates: D7611. Page 12. 5) Unknown author. Review of low tar category. 1979 May 22; 2003 February 10. Bates: 3990592459-3990592490 <https://industrydocuments.library.ucsf.edu/tobacco/docs/hzx0191>. Page 23.
- ⁵⁶ 1) Pollay RW. The role of packaging seen through industry documents. Mar 2001. Expert Report prepared for: JTI-Macdonald., Imperial Tobacco Canada Ltd and Rothmans, Benson & Hedges Inc. v. Attorney General of Canada and Canadian Cancer Society (Intervenor). Supreme Court, Province of Quebec, District of Montreal. Defense Exhibit D-116. (2) Wakefield M, Morley C, Horan JK, Cummings KM. The cigarette pack as image: new evidence from tobacco industry documents. *Tob Control* 2002; 11(Suppl 1):i73-i80. 3) Unknown author. Consumer product testing. 1978 September. Bates: 2042790197/0215. Page 1. <https://industrydocuments.library.ucsf.edu/tobacco/docs/zlxn0169> (4) British-American Tobacco Company Limited, Cater R. Value and Horizon in Australia. 1997 August. Bates: 321383082-321383101. <https://industrydocuments.library.ucsf.edu/tobacco/docs/mnk0193> (5) British-American Tobacco Company Limited, Abley C. Parliament Strategic Brand Review. 1999 October 20. Bates: 321340314-321340412. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fyg0207> 6) Unknown. Project Traf. [date]. Imperial Tobacco Ltd. <https://industrydocuments.library.ucsf.edu/tobacco/docs/nkmv0223>. Bates: D21677. Page 4. 7) Qualitative Science (1991, June). Exploration of various design parameters re: Export "A" pack re-design. Prepared for RJR-Macdonald Inc., Exhibit D-235 (JTI-1677), JTI-Macdonald Corp., Imperial Tobacco Canada Ltd., and Rothmans, Benson & Hedges Inc. v. The Attorney General of Canada. Quebec Superior Court, p. 23192.
- ⁵⁷ 1) Sheridan C. 1994. Pack leaders to beat the ban. In: King T, Owen B, Oldman M, ed. *The tobacco industry 1994*. Millennium Press, London, UK. P.99, 101. 2) Unknown. Export Family Packaging Design Brief (RJR-1608). Unknown. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/bxyx0149>. Bates: TA22934-TA22937. Page 1. 3) Brown D. 1989. Transcript, RJR-Macdonald Inc. v. Canada (Attorney General). 4 Oct, p.1050.
- ⁵⁸ 1) O'Connor RJ, Caruso RV, Borland R, Cummings KM, Bansal-Travers M, Fix BV, King B, Hammond D, Fong GT. Relationship of cigarette-related perceptions to cigarette design features: Finding from the 2009 ITC US Survey. *Nicotine & Tobacco Research* 2013; 15(11): 1943-7. 2) National Cancer Institute. *Smoking and Tobacco Control Monograph No 13: Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine*. Report of the NCI Expert Committee. Bethesda, MD: National Institutes of Health; 2001.
- ⁵⁹ 1) Philip Morris, Barnes P, Webb WH. Change in existing brand Virginia Slims Lights 100'S FTB. 1996 April. Bates: 2047040613/0625. <https://industrydocuments.library.ucsf.edu/tobacco/docs/sgvb0175>. (2) Canter Achenbaum Associates. An assessment of merit's current market situation. 1985 July. Bates: 2040333209 - 3248. <https://industrydocuments.library.ucsf.edu/tobacco/docs/> (3) Leo Burnett USA, D'Albis P. Merit In-Switching Study - Topline of Findings. 1994 August 30. Bates: 3990261665/3990261671. <https://industrydocuments.library.ucsf.edu/tobacco/docs/rrvg0189>. (4) Philip Morris, Fountaine RS. Packaging of Marlboro 100'S. 1970 December 08. Bates: 2040420329 - 0345. <https://industrydocuments.library.ucsf.edu/tobacco/docs/ttlg0114>. (5) LEO BURNETT AGENCY. Merit brand image study. 1987 September 16. Bates: 2072735414/5500. <https://industrydocuments.library.ucsf.edu/tobacco/docs/sjgb0077>. (6) Houck WG, Jones B, Martin P, Meyer LF. 1600 - Smoker psychology low delivery cigarettes and increased nicotine/tar ratios, a replication. 1975 October. Bates: 1003288950 - 8967. <https://industrydocuments.library.ucsf.edu/tobacco/docs/nfk0028>. (7) Research Centre. Project Magic. 1985 June. Bates: 2501008130 - 8154. <https://industrydocuments.library.ucsf.edu/tobacco/docs/hnww0110>. (8) Jones BW, Martin PG, Ryan FJ. Behavioral research annual report. 1975 July 18. Bates: 1003288378/8405. <https://industrydocuments.library.ucsf.edu/tobacco/docs/ghgp0124>. (9) Ellison A. Qualitative research. A qualitative analysis of the light/low tar category with particular emphasis on consumer reactions to advertising language and prototype concepts for Salem Lights. 1977 November. Bates: 501226743 - 6772. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fslh0091>. (10) Leber Katz. Study investigating possibilities

5. PUBLIC HEALTH CONCERNS PRESENTED BY 'LIGHT' CIGARETTES

IMPORTANCE OF HEALTH CONCERNS TO SMOKING BEHAVIOUR

Health knowledge and risk perceptions have a fundamentally important influence on smoking behaviour.^{60,61,62,63} Health concerns began to increase in the 1950s due to increasing publicity about the health effects of smoking, at which point health concerns became, "the most powerful driving force in the cigarette market."⁶⁴ Landmark reports on the health effects of smoking in the US and Canada in the 1960's increased health concerns further, and led to unprecedented levels of quitting among smokers.^{65,66,67}

The design and marketing of 'light' cigarettes was a direct response to rising health concerns. By the 1970's, most smokers were experiencing 'cognitive dissonance': an unpleasant emotional state due to a conflict between their smoking behaviour and their knowledge that smoking was harmful.⁶⁸ One means of reducing cognitive dissonance is to quit smoking; however, nicotine addiction represents a significant barrier to quitting; fewer than 1 in 10

for alternative creative strategies for Vantage cigarettes. 1971 March 15; 1976 January 29. Bates: 500483356 – 3383. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fkmg0099>. (11) Weaver MJ. Cigarette smoking, health, and dissonance (Project Libras): -IV. Further analysis, conclusions and recommendations Report No. RD.1825. 1981 August 25. Bates: 650018899 – 8950. <https://industrydocuments.library.ucsf.edu/tobacco/docs/znmk0134>. (12) Unknown author. A brief look at the dynamics of the cigarette industry 770000. 1977 January. Bates: 670306374 – 6389. <https://industrydocuments.library.ucsf.edu/tobacco/docs/rmpy0139>. (13) Short PL. Smoking and Health Item 7: The Effect on Marketing. 1977 April 14. Bates: 100427792 -7800. <https://industrydocuments.library.ucsf.edu/tobacco/docs/kqvw0040>. (14) Daniel & Charles Assoc. Ltd. Lucky Strike Focus Group Sessions Results. 1981 May. Bates: 990901344/1367. <https://industrydocuments.library.ucsf.edu/tobacco/docs/yhvy0002>. (15) Nowland Organization. SHF Cigarette Marketplace Opportunities Search and Situation Analysis Volume II Management Report. 1976 December. Bates: 84053709/3744. <https://industrydocuments.library.ucsf.edu/tobacco/docs/qmmm0104>. (16) Hammond D, Parkinson C. The impact of cigarette package design on perceptions of risk. *Journal of Public Health* 2009; 31(3):345-53.

⁶⁰ 1) Surry SJ, Grothaus L, McBride C. Reasons for quitting: Intrinsic and extrinsic motivation for smoking cessation in a population-based sample of smokers. *Addict Behav* 1997; 22: 727–39. 2) Hammond D, McDonald PW, Fong GT, et al. The impact of cigarette warning labels and smoke-free bylaws on smoking cessation: evidence from former smokers. *Can J Public Health* 2004; 95: 201–204. 3) Hyland A, Li Q, Bauer JE, et al. Predictors of cessation in a cohort of current and former smokers followed over 13 years. *Nicotine Tob Res* 2004; 6(Suppl 3): S363–69.

⁶¹ Imperial Tobacco Limited. Project Viking, Wave 2 July/August 1988. 1989 July. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=nlgx0149>. Bates: TCA13850-TCA13973. 2) The Creative Research Group. Project Viking Volume II: An Attitudinal Model of Smoking. 1986 February. Marketing to Youth. <https://industrydocuments.library.ucsf.edu/tobacco/docs/lrdj0045>. Bates: 00160998-00161079. 3) The Creative Research Group Limited. Project Viking - Wave 3. 1991 December. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/lllx0149>. Bates: TA36313-TA36316.

⁶² Abacus Research Associates. Factory made cigarette market usage and attitude study January 1995 MRD#94-010. 1995 January 03. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/hkyv0223>. Bates: D341602.

⁶³ Unknown. Project Traf. Imperial Tobacco Ltd. <https://industrydocuments.library.ucsf.edu/tobacco/docs/nkmv0223>. Bates: D21677.

⁶⁴ Philip Morris. Cosmic history of tobacco use benefits, costs, and social influences. 1992. Bates: 2023768423-2023768483. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/tyyf0131>

⁶⁵ 1) ORC International Limited. The Canadian Smoker 1969 - A National Consumer Study for Rothmans of Pall Mall Canada Limited. 1969 December 01. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/xhdb0223>. Bates: D508101. 2) Imperial Tobacco Limited. Project Viking, Wave 2 July/August 1988. 1989 July. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/nlgx0149> Page 31-32. Bates: TCA13850-TCA13973. 3) The Creative Research Group. Project Viking Volume II: An Attitudinal Model of Smoking. 1986 February. Marketing to Youth. <https://industrydocuments.library.ucsf.edu/tobacco/docs/lrdj0045> Page 32. Bates: 00160998-00161079. 4) The Creative Research Group Limited. Project Viking - Wave 3. 1991 December. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/lllx0149>. Bates: TA36313-TA36316. 4) Imperial Tobacco Products Limited. Smoking and Health Analysis and Recommendations. 1973 January 01. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/zgyv0223> Page 13. Bates: D3333.

⁶⁶ Ed Ricard Testimony. [Interrogatoire apres defense Ed Ricard En chef par Me Regnier.] 2001 January 26. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/nmkx0149> Page 74.

⁶⁷ Market Facts Incorporated. 1977 Segmentation of The French and English Speaking Canadian Cigarette Markets. 1977 June. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fnkx0223>. Bates: D7611. Page 10.

⁶⁸ Festinger LA. (1957). A theory of cognitive dissonance. Evanston, IL: Row, Peterson.

smokers smoking succeed in maintaining long term abstinence for any given quit attempt.⁶⁹ Tobacco companies offered 'light' cigarettes as an alternative means of reducing cognitive dissonance—consumers could reduce their guilt and worry without having to quit by switching to what was ostensibly a less harmful cigarette, as noted by tobacco companies:

*Almost all respondents expressed a desire for a healthier safer cigarette. Most appear to recognize three alternatives in achieving their health objective... quit, smoke fewer cigarettes or smoke a lower T & N product. The apparent and consistent preference is for the latter since a cigarette with little or no tar and nicotine appears likely to remove much of their current guilt.*⁷⁰

'LIGHT' CIGARETTES PROVIDED FALSE REASSURANCE TO CONSUMERS & INHIBITED QUITTING

Indeed, industry efforts to market 'light' and 'mild' brands as less harmful were highly successful.^{71,72,73,74,75} Unlike the tobacco companies, consumers were largely unaware of how 'low tar' cigarettes were designed, or the distinction between tar and nicotine numbers produced by the smoking machine and actual levels of exposure.⁷⁶ 'Light' cigarettes were disproportionately used by smokers with greater levels of health concern and provided reassurance to consumers who used these brands.^{77,78,79,80,81,82,83,84,85,86,87} As Donald Brown, a Vice-President at

⁶⁹ Fiore MC, Jaén CR, Baker TB, Bailey WC, Benowitz NL, Curry SJ, et al. Treating Tobacco Use and Dependence: 2008 Update—Clinical Practice Guidelines. Rockville (MD): US Department of Health and Human Services, Public Health Service, Agency for Healthcare Research and Quality; 2008.

⁷⁰ Unknown. Segmentation - Phase I - Focus Group Research - Ontario/Quebec. 1991 February 01. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/jqcb0223>. Bates: D487484. Page 33.

⁷¹ Market Facts Incorporated. 1977 Segmentation of The French and English Speaking Canadian Cigarette Markets. 1977 June. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/fnk0223>. Bates: D7611. Page 90.

⁷² Chan A, Porter A, Smith T, Project Day. 1988 June 21. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/zlkv0223>. Bates: D74035. Page 3 & 5.

⁷³ Contemporary Research Centre Limited. Report of a survey on current consumer beliefs and attitudes towards smoking and health, and their effect on smoking behaviour prepared for Rothmans of Pall Mall (Canada) Ltd. 1977 March. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/hlv0223>. Bates: D96433. Page 11.

⁷⁴ RJR-Macdonald Inc. 1977. Canada. RJ Reynolds Tobacco International. 1978 annual business plan. Marketing plans: Export 'A' Lights. In: RJR-Macdonald Inc. 1978 business plan of RJR-Macdonald. Exhibit AG-14, RJR-Macdonald Inc. v. Canada (Attorney General). P.2102-2148. [Smoke & Mirrors, p.160]

⁷⁵ Ricard E. Under 5 Mg Segment. 1989 March 08. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/mxdb0223>. Bates: D51155.

⁷⁶ 1) Cummings KM, Hyland A, Bansal M, Giovino G. What do Marlboro Lights smokers know about low-tar cigarettes? *Nicotine & Tobacco Research* 2004; 6 (S3): 323–S332. 2) Kozlowski, L. T., Goldberg, M. E., Yost, B. A., Ahern, F. M., Aronson, K. R., & Sweeney, C. T. (1996). Smokers are unaware of the filter vents now on most cigarettes: results of a national survey. *Tobacco Control*, 5, 265–270. 3) Kozlowski, L. T., White, E. L., Sweeney, C. T., Yost, B. A., Ahern, F. M., & Goldberg, M. E. (1998). Few smokers know their cigarettes have filter vents. *American Journal of Public Health*, 88, 681–682.

⁷⁷ Roper Organization. A study of smokers' habits and attitudes with special emphasis on low tar cigarettes. 1976 May. Bates: 2022207324-2022207325. <https://industrydocuments.library.ucsf.edu/tobacco/docs/jffv0125>

⁷⁸ Longmire, D. (1978, August 14). Memorandum to J. Granville: Summary of focus group sessions. Philip Morris. Bates: 1004888470–1003293321.

⁷⁹ The Roper Organization Inc. A study of smokers' habits and attitudes with special emphasis on low tar and menthol cigarettes. Volume I. Prepared for Philip Morris USA. March 1979. Bates 2049455307-18.

⁸⁰ Review of Low Tar Category (22 May 1979), Bates: 1002617983-7999, p. 1002617998

⁸¹ Goldstein/Krall Marketing Resources Inc. (1979, January). Report prepared for Philip Morris, USA: A qualitative exploration of smoker potential for a new entry in the ultra low tar market (two focused group interviews). Philip Morris. Bates: 2040066741–2040066766.

⁸² Fay Ennis Creative Research Services. An Exploration of Two Cigarette Approaches: "Laser Technology" and "No Fake Flavors." 1976 November 11. Bates: 968362940-968362954, p.8. <https://industrydocuments.library.ucsf.edu/tobacco/docs/tfkh0147>

⁸³ Short P, British American Tobacco. Smoking & Health Item 7: The Effect on Marketing. 28 Apr 1977. Bates: 100427794. <https://industrydocuments.library.ucsf.edu/tobacco/docs/qjb0195>.

⁸⁴ Leber Katz. Study investigating possibilities for alternative creative strategies for Vantage cigarettes. 1971 March 15; 1976 January 29. Bates: 500483356-500483383. <http://industrydocuments.library.ucsf.edu/tobacco/docs/fkmg0099>.

⁸⁵ Hawkinings, McCain & Blumenthal Inc., Low "Tar" Satisfaction Step 1. Identification of perceived and unperceived consumer needs (25 July 1977), Bates: 775036039-6067, p. 775036047.

⁸⁶ Leber Katz Partners, Vantage 1972 Advertising Plan (Sept. 1971), Bates: 500752303-2369, p. 500752316 (JC-018).

ITL, explained in 1989, "We target at people who are looking for milder brands and we are well aware that the primary reason many of them are looking for milder brands is because they believe a milder brand is better for their health."⁸⁸ Brands such as Player's were central to executing this marketing strategy, according to confidential ITL documents:

*Player's Extra Light continues to be positioned as a milder, therefore healthier, version of Player's Light. It remains a health oriented alternative for interested Player's smokers. Its role will continue to be as such.*⁸⁹

The ultimate impact of 'light' cigarettes was not simply to mislead consumers, but to keep them smoking when they would otherwise have quit. Even before lower tar cigarettes were branded as 'light', many smokers were switching to 'lower tar' brands rather than quitting.⁹⁰ This phenomenon accelerated in 1970s with the introduction of 'light' cigarettes, as noted in industry research:

*The response to a concern about smoking and health appears to have changed somewhat since the 1960's. Attempting to quit the habit which was the typical response a few years ago is now less common than moving to a lower-delivery, 'safer' cigarette. This change is not so much a reflection of a change in attitudes, since the majority of smokers believe the habit to be harmful, but of the increased opportunity to move down in terms of 'strength'.*⁹¹

Consumer research and sales data indicated very low levels of quitting among 'ultra low tar' brands, despite the fact that these brands attracted smokers with the greatest motivation to quit.⁹² For example, in 1978, ITL noted, "...virtually no quitting among smokers of [ultra low tar] brands, and there are indications that the advent of ultra low tar cigarettes has actually retained some potential quitters in the cigarette market by offering them a viable alternative."⁹³ The health reassurance provided by switching to a 'light' brand provided an "excuse" not to stop smoking:

*All of these smokers expressed an awareness of a health hazard from smoking, but felt they had alleviated some of this hazard by smoking an ultra low brand. They described these cigarettes as "safer". With these justifications, there may be less of a compulsion to quit smoking... In point of fact, smoking an ultra low tar cigarette seems to relieve some of the guilt of smoking and provide an excuse not to quit.*⁹⁴

Market trends in Canada clearly indicated that 'light' cigarettes had helped to retain smokers in the market, as summarized by ITL as early as 1979:

⁸⁷ Philip Morris Internal Document, Deposition of the Defendant, Philip Morris Companies, Inc., by James Morgan (5 June 2002), Bates: 3990011501-1677, pp. 3990011544-1545.

⁸⁸ Brown D. 1989. Transcript, RJR-Macdonald Inc. v. Canada (Attorney General). 3 Oct, p.909.

⁸⁹ Imperial Tobacco Ltd. Circa 1987. Player's 1988. Exhibit AG-210, RJR-Macdonald v. Canada (Attorney General). [Smoke & Mirrors, p.160]

⁹⁰ Green D. Richmond and Ransom Hi-Fi Smoking and Health. 1969 July 11. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/nkmv0223>. Bates: D21677. Page 6.

⁹¹ Contemporary Research Centre Limited. Report of a survey on current consumer beliefs and attitudes towards smoking and health, and their effect on smoking behaviour prepared for Rothmans of Pall Mall (Canada) Ltd. 1977 March. Canadian Tobacco Industry. <https://industrydocuments.library.ucsf.edu/tobacco/docs/hlv0223>. Bates: D96433. Page 16.

⁹² Philip Morris, Holbert N. Marketing research department report Marlboro Lights and Winston Lights: views of current smokers and trier - rejectors. 1978 March 22. <https://industrydocuments.library.ucsf.edu/tobacco/docs/ljp0106>. Bates: 2045016587-2045016615.

⁹³ Unknown. Reponse Of the market and of Imperial tobacco to the smoking and health environment. 1978 May. <https://industrydocuments.library.ucsf.edu/tobacco/docs/shhb0223>. Bates: D594360.

⁹⁴ Goldstein/Krall Marketing Resources Inc. (1979, January). Report prepared for Philip Morris, USA: A qualitative exploration of smoker potential for a new entry in the ultra low tar market (two focused group interviews). Philip Morris. Bates: 2040066741-2040066766.

*Prior to the introduction of "Light" cigarettes, there had been a fear that they would provide smokers with a way out of the market. However, quite the opposite has been proven to be the case: smokers see "Light" cigarettes as an alternative to not smoking and some smokers who might otherwise have quit have been able to continue.*⁹⁵

By the 1980 and 1990, it was well-established within the industry that 'lights' had become an alternative to quitting, including among teenagers.^{96,97,98,99,100}

Overall, the effect of 'light' cigarettes in reducing quitting among Canadian smokers is substantial by any measure, both on an individual level and in terms of the public health impact.

6. CONTINUING PUBLIC HEALTH CONCERNS FROM 'LIGHT' CIGARETTES

Since the introduction of 'light' cigarettes, levels of health knowledge and concern about the effects of smoking have increased due to enhanced health warnings and other forms of public education. At present, virtually all Canadian smokers regret having started, and cite "concern for personal health" as the primary motivation for quitting smoking.^{101,102,103} Smokers remain in a highly dissonant state with respect to their smoking behaviour and health beliefs, and are no more likely to succeed in quitting than when 'light' cigarettes were introduced.¹⁰⁴ Thus, the market forces that predisposed smokers to use 'light' cigarettes are as strong today as ever.

MANY CONSUMERS CONTINUE TO BELIEVE THAT 'LIGHT'/'LOW TAR' CIGARETTES ARE LESS HARMFUL

A range of studies have established that false beliefs about 'light' cigarettes remain prevalent, and are not simply an historical legacy.¹⁰⁵ In an effort to address the ongoing public health impact from 'light' cigarettes, the terms

⁹⁵ Unknown. Notes for a presentation by Norman A. Dann, Vice President, public relations Imasco limited (Canada) to the conference on smoking and health issues, Chelwood, England, 1979 November 06. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/ypkb0223>. Bates: D63166. Page 13.

⁹⁶ Imperial Tobacco Limited. Bedard M, Woods J. Marketing vs smoking/health Issues in Canada. 1980 October. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/rskv0223>. Bates: D9069. Page 50.

⁹⁷ Kwechansky Marketing Research Incorporated. Project Plus/Minus. 1987 May 07. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/hnlx0149>. Bates: TA34527-TA34599.

⁹⁸ The Creative Research Group Limited. 1986. Project Viking. Vol. III: Product issues. Prepared for Imperial Tobacco Ltd. Feb-Mar. Exhibit AG-21C, RJR-Macdonald Inc. v. Canada (Attorney General).

⁹⁹ RJRMI. Authorization Request - Project - Vantage Ontario Relaunch. 1996 January 01. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/klhb0223>. Bates: D594431. Page 3.

¹⁰⁰ Johnston & Associates. Viscount. 1992 March. Canadian Tobacco Industry. <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/mkwb0223>. Bates: D565638. Page 8.

¹⁰¹ Fong et al. International Tobacco Control Policy Evaluation Project: Canada Wave 9 Survey; 2016.

¹⁰² Fong GT, Hammond D, Laux FL, Zanna MP, Cummings KM, Borland R, Ross H. The near-universal experience of regret among smokers in four countries: findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine Tob Res* 2004; 6 Suppl 3: S341-51.

¹⁰³ 1) Surry SJ, Grothaus L, McBride C. Reasons for quitting: intrinsic and extrinsic motivation for smoking cessation in a population-based sample of smokers. *Addict Behav* 1997; 22: 727-39. 2) Hammond D, McDonald PW, Fong GT, et al. The impact of cigarette warning labels and smoke-free bylaws on smoking cessation: evidence from former smokers. *Can J Public Health* 2004; 95: 201-204. 3) Hyland A, Li Q, Bauer JE, et al. Predictors of cessation in a cohort of current and former smokers followed over 13 years. *Nicotine Tob Res* 2004; 6(Suppl 3): S363-69.

¹⁰⁴ Reid JL, Hammond D, Rynard VL, Burkhalter R. Tobacco Use in Canada: Patterns and Trends, 2015 Edition. Waterloo, ON: Propel Centre for Population Health Impact, University of Waterloo; 2015.

¹⁰⁵ 1) Shiffman S, Pillitteri JL, Burton SL, Rohay JM, Gitchell JG. Smokers' beliefs about 'light' and "ultra light" cigarettes. *Tobacco Control*. 2001;10(Suppl 1):i17-i23. 2) Ashley MJ, Cohen J, Ferrence R. 'Light' and 'mild' cigarettes: who smokes them? Are they being misled? *Canadian Journal of Public Health*. 2001;92(6):407-11. 3) Etter JF, Kozlowski LT, Perneger TV. What smokers believe about light and ultralight cigarettes. *Preventative Medicine*. 2003;36(1):92-8. 4) Gilpin EA, Emery S, White MM, Pierce JP. Does tobacco industry marketing of 'light' cigarettes give smokers a rationale for postponing quitting? *Nicotine & tobacco research: official journal of the Society for Research on Nicotine and Tobacco*. 2002;4:S147-55. 5) Weinstein ND [US Department of Health and Human

'light', 'mild', and 'low tar', were prohibited in Canada in 2007 and in more than 50 other countries in compliance with guidelines under the World Health Organization's *Framework Convention in Tobacco Control*.¹⁰⁶ However, false beliefs have persisted among Canadian consumers and those in other countries even after the removal of these terms from cigarette packages.^{107,108}

The persistence of false beliefs is a legacy of cigarette advertising and marketing that promoted these brands as less harmful: simply removing these words from packs is not sufficient to extinguish consumer perceptions which were carefully groomed over many decades.¹⁰⁹ Current marketing practices have helped to sustain false beliefs, including the use of 'replacement' descriptors, such as 'smooth' which convey the same principle as 'light'. For example, after 2007, *Export 'A' Light, Extra Light, and Ultra Light* became *Export 'A' Smooth, Extra Smooth, and Ultra Smooth*, respectively.¹¹⁰ Other brands incorporated tar numbers or the names of colours into their brand name; for example, 'lighter' brands were given the names of lighter colours, such as *Player's White* compared to *Player's Full Flavour*.¹¹¹ 'Colour coding' was also used in the visual design of cigarette packs so that 'light' brands featured lighter colours, with a greater use of white space on packages. Retailer initiatives in Canada also helped consumers to link 'old' and 'new' brand descriptors by using pamphlets and other marketing materials. These materials conveyed the message that only the name of the brand had changed—all other properties of 'light' brands remained the same.¹¹² The relative ineffectiveness of removing the words 'light' and 'mild' from packs in the context of these other marketing practices was illustrated by research conducted by Philip Morris:

Services, Public Health Services, National Institutes of Health). Public Understanding of Risk and Reasons for Smoking Low-Yield Products. In: Smoking and Tobacco Control Monograph 13: Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine. Bethesda (MD): National Cancer Institute; 2001:193-98. 6) Ling PM, Glanz SA. Tobacco industry research on smoking cessation: recapturing young adults and other recent quitters. *J Gen Intern Med*. 2004;19(Pt 1):419-26. 7) Bansal-Travers M, Hammond D, Smith P, Cummings KM. The Impact of Cigarette Pack Design, Descriptors, and Warning Labels on Risk Perception. *American Journal of Preventive Medicine* 2011; 40(6): 674-82. 8) Kropp RY, Halpern-Felsher BL. Adolescents' beliefs about the risks involved in smoking 'light' cigarettes. *Pediatrics* 2004;114(4):445-51. 9) Borland R, Yong HH, King B, Cummings KM, Fong GT, Elton TE, Hammond D, McNeill A. Use of and beliefs about 'light' cigarettes in four countries: Findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine and Tobacco Research* 2004; 6(3): S311-21.

¹⁰⁶ World Health Organization. WHO Framework Convention on Tobacco Control. 2005. Geneva, Switzerland. http://www.who.int/tobacco/framework/WHO_FCTC_english.pdf

¹⁰⁷ 1) Mutti S, et al. Beyond light and mild: cigarette brand descriptors and perceptions of risk in the International Tobacco Control (ITC) Four Country Survey. *Addiction* 2011; 106(6):1173. 2) Hammond D, Parkinson C. The impact of cigarette package design on perceptions of risk. *J Public Health* 2009; 3:345-53. 3) Borland R, Fong, GT, Yong HH, Cummings KM, Hammond D, et al. What Happened to Smokers' Beliefs about Light Cigarettes When "Light/Mild" Brand Descriptors Were Banned in the UK? Findings from the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control* 2008; 17(4):256-62. 4) Yong HH, Borland R, Cummings KM, Hammond D, O'Connor, Hastings, King B. Impact of the removal of misleading terms on cigarette pack on smokers' beliefs about Light/Mild cigarettes: Cross-country comparisons. *Addiction* 2011; 106(12):2204-13.

¹⁰⁸ 1) Yong HH, Borland R, Cummings KM, Hammond D, O'Connor, Hastings, King B. Impact of the removal of misleading terms on cigarette pack on smokers' beliefs about Light/Mild cigarettes: Cross-country comparisons. *Addiction* 2011; 106(12):2204-13. 2) Borland R, Fong, GT, Yong HH, Cummings KM, Hammond D, et al. What Happened to Smokers' Beliefs about Light Cigarettes When "Light/Mild" Brand Descriptors Were Banned in the UK? Findings from the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control* 2008; 17(4):256-62. 3) Hammond D, Arnott D, Dockrell M, Lee A, McNeill A. Cigarette pack design and perceptions of risk among UK adult and youth: evidence in support of plain packaging. *European Journal of Public Health* 2009; 19(6):631-7. 4) Gravelly S, Fong GT, McNally M, Driezen P, Thrasher JF, Thompson ME, Boado M, Bianco E, Borland R, Hammond D. The impact of the 2009 enhancement of cigarette health warning labels in Uruguay: Longitudinal findings from the ITC Uruguay Survey. *Tobacco Control* 2016; 25: 89-95.

¹⁰⁹ Now 1985 Business Analysis - Summary Analysis. Aug 8, 1984, Bates: 503610884 - 0907. JC++059.

¹¹⁰ Dewhirst, T., Gender, extreme sports, and smoking: A case study of Export 'A' cigarette brand marketing in Fuller, L. (ed.), *Sexual Sports Rhetoric: Global and Universal Contexts* (2010), pp. 263-275.

¹¹¹ Anderson, S., et al, Taking ad-Vantage of lax advertising regulation in the USA and Canada: Reassuring and distracting health-concerned smokers, *Social Science & Medicine*, Vol. 63, 2006, pp. 1973-1985.

¹¹² See JTI-Macdonald Corp., JTI Descriptor Reference.

approximately 60% of adult smokers did not even notice any packaging changes when 'light' and 'mild' terms were removed from US packs in 2010.^{113,114}

Most importantly, the most fundamental aspect of 'light' cigarettes remains unchanged: cigarettes continue to be engineered to produce lower machine numbers and to provide a 'lighter' sensory experience to smoking. Virtually all Canadian cigarettes continue to be manufactured using filter ventilation and other aspects of product design which give the impression of reduced exposure, but subject consumers to similar or greater levels of harm.

Overall, substantial proportions of consumers continue to believe that 'light' cigarette brands are less harmful. The Government of Canada has recently identified the persistence of false beliefs as an important public health issue and is developing new regulations to restrict current marketing practices that have helped to sustain these beliefs.¹¹⁵

January 25th, 2017

DATE




David Hammond, PhD

¹¹³ Altria Client Services, Memorandum re Marlboro Pack Identifier Qualitative Research (26 Mar. 2010), Bates number: 3104473670. Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=jkcg0189> ("Marlboro Lights and Marlboro Ultra Lights adult Smokers were least confused by the pack change. Many of these adult smokers were easily able to identify their pack in the display. Many did not notice a difference until it was pointed out."); Altria Client Services, Memorandum re FDA Monitor Qualitative - AS Rendezvous Quick Observations (18 June 2010), Bates number: 3104474100 ("There seemed to be no confusion around the Marlboro Gold Pack.") Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=kkcg0189>

¹¹⁴ Altria Client Services, Email re FDA Awareness Study - Status (10 June 2010), Bates number: 5028316010-6011 ("Close to 6 in 10 (57%) of adult smokers have not noticed any packaging changes."). Available at: <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=lkcg0189>

¹¹⁵ E.g., Consultation on "plain and standardized packaging" for tobacco products: Document for consultation, May 2016. Available at: <http://healthycanadians.gc.ca/health-system-systeme-sante/consultations/tobacco-packages-emballages-produits-tabac/alt/tobacco-packages-emballages-produits-tabac-eng.pdf>

This is Exhibit "I" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

**THE EVOLUTION OF PUBLIC HEALTH RECOMMENDATIONS
REGARDING LOW TAR AND NICOTINE CIGARETTES**

REPORT OF DAVID M. BURNS, M.D.

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I. Mandate

1. I have been asked by legal counsel for the Government of Canada to describe the development of the scientific understanding of the disease consequences of cigarette smoking as reflected in the U.S. Surgeon General's Reports on smoking and health. In order to address this question, a proper understanding of the means through which the public health community reached scientific consensus and issues recommendations, as well as a proper understanding of the health consequences of smoking, are essential. These are addressed in sections III through V of this report. In addition, I have been asked to describe and explain the evolution of the positions taken by the public health community at large with respect to low tar and nicotine delivery products over the period from their introduction in the marketplace to this day. This issue is formally addressed in section VI of this report.

II. Qualifications and Experience

2. I am a medical doctor, professor emeritus of family and preventive medicine at the University of California, San Diego School of Medicine. I am currently licensed to practice medicine in the State of California, and I am board certified in Internal Medicine, Pulmonary Medicine and have a certificate of special competence in Critical Care Medicine.

3. I received my doctorate in medicine at Harvard Medical School in 1972. I trained in Internal Medicine on the Harvard Medical Service at Boston City Hospital from 1972 through 1974. I received my training in Pulmonary Medicine at the University of California, San Diego School of Medicine from 1976 through 1979. Between these two periods of training, I was medical officer for the National Clearinghouse for Smoking and Health at the U.S. Centers for Disease Control and Prevention of the U.S. Public Health Service. My responsibilities at that time included the preparation of the 1975 U.S. Surgeon General's Report on the Health Consequences of Smoking and editing the 1976 U.S. Surgeon General's report.

4. Subsequent to that time, I have been an author, editor or reviewer for each of the annual reports of the U.S. Surgeon General on the Health Consequences of Smoking. Specifically, I authored multiple chapters in the 1979 report and assisted in editing that volume. I was a Consulting Scientific Editor from 1980 through 1983, and from 1984 through 1986 I was the Senior Scientific Editor for these reports. Since that time, I have been a Senior Reviewer for each of the reports including the "Health Consequences of Smoking: Addiction" in 1988, "Health Consequences of Smoking: Twenty-five Years of Progress" in 1989, "Health Benefits of Smoking Cessation" in 1990, "Preventing Tobacco Use Among Young People" in 1994, "Tobacco Use Among U.S. Racial/Ethnic Minority Groups" in 1998, "Reducing Tobacco Use" in 2000, "Women and Smoking" in 2001, "The Health Consequences of Smoking" in 2004, "The Health Consequences of

Involuntary Exposure to Tobacco Smoke” in 2006, and “How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease” in 2010.

5. I was Senior Scientific Editor and a contributing author for a series of tobacco control monographs for the U.S. National Cancer Institute, including Monograph 13 titled “Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine,” which was published in conjunction with the U.S. Department of Health and Human Services and the National Institutes of Health. I co-authored Chapters 1 and 4 of that publication. In addition, I have been a consultant to the U.S. National Cancer Institute and served on the Policy Advisory Committee for the COMMIT trial conducted by the U.S. National Cancer Institute.

6. I have written extensively on the issue of the disease consequences of smoking, including authoring a chapter titled “Nicotine Addiction” in Harrison’s Principles of Internal Medicine. I have consulted with the Canadian government and the World Health Organization on smoking and health-related issues, specifically including consideration of the propriety of using the term “Lights” as a cigarette product descriptor.

7. Additional qualifications, including my education; postgraduate training; teaching assignments; and staff appointments; memberships and offices; awards; and publications are reflected in the curriculum vitae marked Attachment A to this report.

III. Process of preparation for Surgeon General’s Reports

8. Smoking and health is one of the most studied subjects in the field of public health. The medical literature is replete with extensive epidemiological studies, conducted over decades, comparing the disease and death rates of millions of smokers and nonsmokers. Every relevant population and demographic grouping has been examined. Examples of these studies are: American Cancer Society Prevention Study I and II, British Physicians Study, the Study of Canadian Veterans by Best, and the Dorn Study of U.S. Veterans. This body of literature has been reviewed and presented in Reports of the Surgeon General on Smoking and Health published in 1964, 1967, 1968, 1969, 1971, 1972, 1973, 1974, 1975, 1976, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1988, 1989, 1990, 1992, 1994, 1998, 2000, 2001, 2004, 2006 and 2010 (references for each of these reports are listed in Attachment B to this report).

9. As noted above, I have been an author, editor or reviewer of each of the reports of the Surgeon General since 1975 and as such, I have a detailed understanding of how these reports are developed and prepared. The scientific conclusions presented in the reports are based on the consensus of current scientific understanding. That consensus is formed by reviewing all of the scientific evidence available; examining that evidence for its strength, consistency, coherence, temporal association and biological plausibility; and then reaching a judgment as to whether the data support a causal relationship between smoking and a disease. That process occurs through a set of expert reviews of the report at various stages in its preparation.

10. Initial drafts of chapters are prepared for each report by experts on the content areas of the chapter, with the constraints that all of the pertinent scientific literature is to be considered and that conclusions of the chapter are to be based on the data presented in that literature rather than on the individual perspective of the author. Once the chapters are submitted, the editors make all subsequent changes and the chapters are not resubmitted to the authors for approval of those changes. The chapters are next sent out to a group of expert scientific reviewers for peer review of their scientific accuracy and completeness, as well as for balance, tone and appropriateness of the conclusions drawn from the scientific data. These comments are integrated into the volume, and the entire volume is sent out to a group of senior scientists in the academic community for review of the entire volume for its accuracy, balance and tone. The report is also formally reviewed by each of the agencies of the U.S. Public Health Service. Once these reviews are completed, the editors again integrate the comments into the text. The completed volume is cleared through the U.S. Department of Health and Human Services and is the official position of the Department on the issue of smoking and health. It is also released to the public and the press, and it is widely recognized internationally as a definitive source of scientific consensus on smoking and health science.

IV. Process of preparation for the NCI Monographs

11. Between 1990 and 2003 the National Cancer Institute produced 15 Smoking and Tobacco Control Monographs. These monographs each focused on a specific issue or aspect of tobacco control and provided a vehicle to synthesize and disseminate information on tobacco issues. Of these 15 monographs, I was the editor for 10 of them and also contributed chapters or other sections of those volumes. The ten monographs that I edited are listed below.

Monograph 1:

Strategies to Control Tobacco Use In the United States: A Blueprint for Public Health Action In the 1990's (December 1991)

Monograph 5:

Tobacco and the Clinician: Interventions for Medical and Dental Practice (January 1994)

Monograph 6:

Community-Based Interventions for Smokers: The COMMIT Field Experience (August 1995)

Monograph 8:

Changes in Cigarette-Related Disease Risks and Their Implications for Prevention and Control (February 1997)

Monograph 9:
Cigars: Health Effects and Trends (February 1998)

Monograph 11:
State and Local Legislative Action to Reduce Tobacco Use (June 2000)

Monograph 12:
Population Based Smoking Cessation (November 2000)

Monograph 13:
Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine (October 2001)

Monograph 14:
Changing Adolescent Smoking Prevalence (November 2001)

Monograph 15:
Those Who Continue To Smoke (September 2003)

12. Some of these monographs are intended to be comprehensive reviews of the existing literature or new analyses of smoking data with the goal of answering specific questions (monographs 1, 9, 12, 13 and 15), while others are intended to be comprehensive analyses of available data on specific topics (monographs 5, 6, 8, 11, 14).

13. Each of the monographs described above were prepared by groups of experts authoring sections and chapters, and each was peer reviewed. The extent of the peer review varied with the purpose of the monograph. Those presenting comprehensive analyses of existing data underwent peer review similar to that conducted by most scientific journals, while those intended to answer specific questions underwent a two level review and clearance similar to that of the Surgeon General's Reports. Notable differences in the review process of the monographs from the process used for the Surgeon General's reports were that the authors participated in or approved the revisions of the chapters in response to the reviewers' comments and the clearance of the volumes was limited to the National Cancer Institute. This peer review and clearance process ensures that the conclusions expressed in the monographs express the consensus of current scientific thought.

14. The process of developing and reviewing Monograph 13 (Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine) is hereafter described in more detail since it is of particular interest for this report. The process reflects the complexity of integrating all of the lines of evidence required to develop scientific conclusions.

15. In response to criticism of the U.S. Federal Trade Commission (FTC) method for machine measurement of tar and nicotine, the FTC requested that the U.S. National

Cancer Institute (NCI) and the U.S. Food and Drug Administration (FDA) conduct a review of the scientific evidence on the risks of smoking lower yield cigarettes and provide advice on how the testing might be modified. The FDA and the NCI elected to use the monograph process to conduct and provide a review of the science. Dr. Neal Benowitz and I were selected as the editors of Monograph 13. In conjunction with the NCI staff, an outline was developed and authors were selected for individual chapters. Subsequently, the U.S. Supreme Court ruled that the FDA could not assert jurisdiction over tobacco products under then existing law, and the FDA ceased to participate.

16. Once the final chapter drafts were received from the authors, they were sent out for review and revised by the editors in association with the authors based on the comments received. The completed volume was then sent out for a second round of review for the entire volume as a whole, and once again the reviewers' comments were incorporated into the text. The volume was then submitted to the NCI for review and once again comments from that set of reviews were discussed, responded to and the text was again revised. Concerns were raised by Richard Peto, a distinguished tobacco epidemiologist, about the interpretation of trends over time in lung cancer rates at young ages in Great Britain. The text was extensively revised to examine those concerns. An additional external discussion of the issues of concern to Richard Peto was conducted at a meeting of NCI and internationally recognized tobacco scientists in Toronto in June 2001, with Richard Peto participating, in order to ensure that all of the differing perspectives on this complex issue were considered in framing the language and content of the conclusions.

17. The volume was again subjected to a detailed external review and the text was once again revised to include the improvements suggested in that review. Once the chapters were in final form, careful consideration was given to the specific language for the conclusions of the chapters and the overall conclusions of the volume. After several iterations, language for the conclusions was agreed upon by the authors, editors and the NCI which would most accurately express the evidence discussed in the volume. This final text and conclusions was submitted for formal clearance and approval by the National Cancer Institute as the official NCI position on the science.

18. The extensive review and prolonged consideration of Monograph 13 reflects both the complexity of the science being considered and the care taken by the NCI and the scientists involved to ensure that the most accurate and complete description of the evidence was provided. This careful consideration of the issues and the data by multiple individuals as part of a formal review and clearance process was intended to, and did, accomplish the objective of developing conclusions that are based solidly on existing evidence and express the understanding of that evidence as clearly and as completely as possible.

V. Development of Scientific knowledge on the health consequences of smoking over time as reflected in the U.S. Surgeon General's reports

19. There is an extensive body of evidence establishing that cigarette smoking is addictive and that nicotine is the addictive agent which has been presented in the 1988 Surgeon General's report.¹ This addiction leads to persistent and compulsive use of cigarettes which leads to persistent repetitive exposure and ingestion of the numerous carcinogens and toxicants present in cigarette smoke. It is this exposure that leads to the disease consequences of cigarette smoking.

20. The complete list of diseases caused by smoking is extensive. The 2004 Surgeon General's Report reached the following conclusions about the diseases caused by smoking.

- a. The evidence is sufficient to infer a causal relationship between smoking and the following cancers: bladder cancer, cervical cancer, esophageal cancer, kidney cancer, laryngeal cancer, leukemia, lung cancer, oral cancer, pancreatic cancer and stomach cancer.
- b. The evidence is sufficient to infer a causal relationship between smoking and the following vascular diseases: abdominal aortic aneurysm, atherosclerosis, cerebrovascular disease and coronary heart disease.
- c. The evidence is sufficient to infer a causal relationship between smoking and the following respiratory diseases: chronic obstructive pulmonary disease, pneumonia, a reduction of lung function in infants, respiratory effects in childhood and adolescence (impaired lung growth during childhood and adolescence; early onset of lung function decline during late adolescence and early adulthood; respiratory symptoms in children and adolescents, including coughing, phlegm, wheezing, and dyspnea; and asthma-related symptoms (i.e., wheezing) in childhood and adolescence), and respiratory effects in adulthood (premature onset of and an accelerated age-related decline in lung function).
- d. The evidence is sufficient to infer a causal relationship between smoking and fetal deaths and stillbirths, reduced fertility in women, low birth weight and complications of pregnancy (premature rupture of the membranes, placenta previa, placental abruption, preterm delivery and shortened gestation).

¹ *The Health Consequences of Smoking: Nicotine Addiction: A Report of the Surgeon General*. U.S. DHHS, Public Health Service, Centers for Disease Control, Center for Health Promotion and Education, Office on Smoking and Health. DHHS Publication No. (DC) 88-8406, 1988.

- e. The evidence is sufficient to infer a causal relationship between smoking and cataracts, hip fractures, low bone density, peptic ulcer disease, and adverse surgical outcomes due to poor wound healing and respiratory complications.

Early epidemiological and experimental evidence that cigarette smoking causes disease

21. Native Americans introduced Europeans to the use of tobacco following Columbus's arrival in the New World, and tobacco provided much of the economic base that allowed the United States to become an independent nation. However, for most of its history tobacco was used in pipes, as cigars or as oral or nasal forms. The use of tobacco as cigarettes was largely a development of the 20th century. Figure 1 shows the use of various tobacco products from 1880 to the present and the shift from other forms of tobacco to cigarettes is evident.

22. Manufactured cigarettes used a different blend of tobacco leaf which generated a more acidic smoke than that of pipes and cigars. Nicotine is the principal constituent of tobacco smoke being sought by the smoker, and it can be easily absorbed across the oral mucosa from the alkaline smoke of pipes and cigars without inhalation into the lung. However, the more acidic smoke of a cigarette must be inhaled into the larger absorptive surface of the lungs in order to absorb amounts of nicotine sufficient to satisfy the smoker's addiction. It is this inhalation into the lung, with its concomitant deposition and absorption of the other toxic and carcinogenic compounds in the smoke, which resulted in the epidemic of cigarette-related diseases evident over the last century.

23. At the start of the twentieth century, lung cancer was an extremely rare disease, however by the early 1930's it was evident that an epidemic of lung cancer was occurring and that most of those with lung cancer were also cigarette smokers. The dramatic progression of the lung cancer epidemic over the next several decades is presented in Figure 2.

24. Figure 2 also illustrates that there was a rapid rise in cigarettes as a form of tobacco use beginning around 1913 and this led to the suspicion that cigarette smoking might be the cause of lung cancer. However, air pollution and many other factors were also suggested as being responsible for the epidemic. The early epidemiological investigations of patients with lung cancer clearly demonstrated the primacy of cigarette smoking in the causation of lung cancer. Retrospective studies of patients with lung cancer revealed that lung cancer patients were more likely to be smokers than control groups without lung cancer² and prospective studies following individuals with no

2 Doll R, Hill AB. Smoking and carcinoma of the lung; preliminary report. *British Medical Journal* 1950;2(4682):739-4; Wynder EL, Graham EA. Tobacco smoking as a possible etiologic factor in bronchiogenic carcinoma; a study of 684 proved cases. *Journal of the American Medical Association*

evidence of lung cancer at the start of the study demonstrated that smokers were much more likely to develop lung cancer than never smokers, that heavy smokers were more likely to develop lung cancer than smokers of fewer cigarettes, and that those who quit were less likely to develop lung cancer than those who continued to smoke³.

25. This epidemiological evidence in humans was supported by experimental studies which demonstrated that cigarette smoke condensate (tar) painted on the backs of rodents caused cancers to develop in those animals⁴. This experimental approach was one of the principal methods for establishing that a substance was carcinogenic at that time.

26. In 1954, the *Canadian Medical Association Journal* published a report showing that the age-standardized rate of death from lung cancer in Canada had increased dramatically over the period 1931–1952, rising from 3.0 to 17.0 deaths per 100,000 population among men and from 1.6 to 3.7 deaths per 100,000 among women.⁵

27. Publication and widespread dissemination in the lay press of the early scientific studies defining the disease risks of smoking cigarettes occurred during the mid 1950's⁶. The initial public health response to this knowledge included a public information campaign and development of smoking cessation interventions for individuals. The combined result of these informational and programmatic efforts was the steep fall in U.S. per-capita consumption of cigarettes in the mid 1950s seen in Figure 2.⁷

28. The emerging scientific evidence led many in the scientific and public health communities to conclude that cigarette smoking could cause lung cancer. This emerging

1950;27;143(4):329–36; Wynder EL, Graham EA. Etiologic factors in bronchiogenic carcinoma with special reference to industrial exposures; report of eight hundred fifty-seven proved cases. *AMA Archives of Industrial Hygiene and Occupational Medicine* 1951;4(3):221–35.

3 Doll R, Hill AB. The mortality of doctors in relation to their smoking habits: a preliminary report. *British Medical Journal* 1954;1(4877):1451–5; Hammond EC, Horn D. The relationship between human smoking habits and death rates: a follow-up study of 187,766 men. *Journal of the American Medical Association* 1954;7;155(15):1316–28; Best ERW, Josie GH, Walker CB. A Canadian study of mortality in relation to smoking habits: a preliminary report. *Canadian Journal of Public Health* 1961;52:99–106; Best ERW. *A Canadian study of smoking and health*. Ottawa: Department of National Health and Welfare; 1966.

4 Wynder EL, Graham EA, Croninger AB. Experimental production of carcinoma with cigarette tar. *Cancer Research* 1953;13(12):855–64.

5 Philips AJ. Mortality from cancer of the lung in Canada 1931–1952. *Canadian Medical Association Journal* 1954;71(3):242–4.

6 Kluger R. Ashes to Ashes, Alfred A. Knopf Inc. 1996; U.S. Department of Health and Human Services. The Health Consequences of Smoking: 25 Years of Progress. U.S. Dept of Health and Human Services, Public Health Service, Centers for Disease Control, Office on Smoking and Health. DHHS Publication No. (CDC) 89-8411, 1989, p. 98-99.; NCI. Strategies to Control Tobacco Use In the United States: a blueprint for public health action in the 1990s, Smoking and Tobacco Control Monograph No.1. USDHHS NIH NCI, 1991, p. 307.

7 Warner, K.E. The effect of the anti-smoking campaign on cigarette consumption. *American Journal of Public Health* 67:645-650, July 1977.

consensus and the residual scientific concerns were characterized in an editorial in the New England Journal of Medicine in 1953⁸ as follows:

“The latest study of Doll and Hill, based on 1465 patients with cancer of the lung and 1465 matched controls, was carefully conducted and yielded evidence of an association between cigarette smoking and lung cancer so strong as to be considered proof within the everyday meaning of the word. Even before presentation of this work, evidence in favor of such an association was strong, deriving especially from a previous investigation by the same authors and from an investigation of 684 cases by Wynder and Graham in the United States.”

29. The scientific consensus was also expressed as a position of the U.S. Public Health Service by then Surgeon General Leroy Burney in a 1957 press release where he stated:

“The Public Health Service said today there is increasing evidence that excessive cigarette smoking is one of the factors which can cause lung cancer.”⁹

30. A more complete and formal expression of the opinion of the U.S. Surgeon General was presented in an article in the Journal of the American Medical Association in 1959 where Dr Burney wrote:

“It is a statutory responsibility of the Public Health Service to inform members of the medical profession and the public on all matters relating to important public health issues. The relationship between smoking and lung cancer constitutes such an issue and falls within this responsibility of the Public Health Service.

The Public Health Service believes that the following statements are justified by studies to date. 1. The weight of evidence at present implicates smoking as the principal etiological factor in the increased incidence of lung cancer.”¹⁰

31. The tobacco industry’s response to this growing scientific consensus and resultant dissemination of the knowledge of the risks of smoking to the general public was to deny that cigarette smoking had been established as a cause of any disease. This was begun with a national advertising presentation of “A Frank Statement to Cigarette Smokers”

8 Cancer of the Lung N Engl J Med 1953; 249:465-466 September 10, 1953

9 Press release U.S. Department of Health Education and Welfare with the Surgeon General’s Statement. July 12, 1957. Legacy Tobacco Documents Library Bates number TIMN0110057/0058.

10 Burney LE. Smoking and Lung Cancer: A statement of the Public Health Service. JAMA 171:1829-1837, Nov 28, 1959.

published by a combined group of U.S. tobacco manufacturers in most U.S. newspapers in January of 1954¹¹. This statement denied that the evidence was sufficient to establish that smoking caused lung cancer and pledged to conduct a research program to examine this question and present the results to the American people. As part of this effort, the cigarette manufacturers jointly created the Tobacco Industry Research Committee (TIRC).¹² The TIRC later divided into the Council for Tobacco Research (CTR) and the Tobacco Institute (TI), an industry public relations and lobbying group which the tobacco manufacturers relied on to present their positions on science and public policy for the next 45 years.

32. This effort to deny the scientific consensus on smoking and health persisted until the tobacco manufacturers were forced to acknowledge the scientific evidence as truth by the 1998 U.S. Master Settlement Agreement of the State Attorneys General litigation. The Council for Tobacco Research and the Tobacco Institute were also dissolved as part of this settlement.

33. Part of the scientific misrepresentation by the cigarette manufacturers was based on conflicting definitions of the use of the word "cause" in scientific discussion. Instead of using the word "cause", as Surgeon General Burney and many others had, to simply mean that smoking cigarettes directly resulted in lung cancer in smokers; the tobacco manufacturers and some scientists insisted that cause could only be used if the mechanism of disease causation was fully established experimentally, or that it could only be used if all smokers developed lung cancer, or if no other exposures could cause lung cancer. While these definitions have some historical reference in the philosophical literature they had little relevance for public health or for the question of concern to individual smokers which was "Will these cigarettes give me lung cancer?"

34. In 1962, The Royal College of Physicians in the United Kingdom comprehensively reviewed the evidence in a report which concluded that cigarette smoking caused lung cancer.

1964 Report of an Expert Committee to the U.S. Surgeon General on Smoking and Health

35. In the U.S., President Kennedy requested that the Surgeon General appoint a panel of distinguished scientists who had not previously expressed a public opinion on whether smoking caused lung cancer to review the evidence and report back to the Surgeon General. Both the tobacco manufacturers and the public health community were offered the opportunity to veto committee members, but neither did.

¹¹ Legacy Tobacco Documents Library Bates numbers 11320896/0896.

¹² Kluger R. *Ashes to Ashes*, Alfred A. Knopf Inc. 1996; Report titled "A Scientific Perspective on the Cigarette Controversy. Legacy Tobacco Documents Library Bates numbers TI03152558/2577; A letter and attachment to Dr. Alex Spears Legacy Tobacco Documents Library Bates numbers 70100983/0985.

36. In January of 1964, after 13 months of careful deliberations, the Expert Committee reported back to the Surgeon General and their review concluded:

“Cigarette smoking is causally related to lung cancer in men; the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive, point in the same direction. The risk of developing lung cancer increases with duration of smoking and the number of cigarettes smoked per day, and is diminished by discontinuing smoking.”

“Cigarette smoking is the most important of the causes of chronic bronchitis in the United States, and increases the risk of dying from chronic bronchitis and emphysema. A relationship exists between cigarette smoking and emphysema but it has not been established that the relationship is causal.”

“It is established that male cigarette smokers have a higher death rate from coronary artery disease than non-smoking males. Although the causative role of cigarette smoking in deaths from coronary disease is not proven, the Committee considers it more prudent from the public health viewpoint to assume that the established association has causative meaning than to suspend judgment until no uncertainty remains.”

“Cigarette smoking is a significant factor in the causation of cancer of the larynx. The evidence supports the belief that an association exists between tobacco use and cancer of the esophagus, and between cigarette smoking and cancer of the urinary bladder in men, but the data are not adequate to decide whether these relationships are causal.”

Subsequent Reports of the Surgeon General

37. Subsequent to the release of the Expert Committee's report to the U.S. Surgeon General, the U.S. Congress passed legislation requiring periodic reports on the scientific evidence. Initially these were reports reviewing the evidence that had been published in the interval since the last report, but in later years they were comprehensive reviews of all of the evidence on particular issues. As described in paragraph 10, each of these reports is extensively peer reviewed, cleared by the agencies of the U.S. Public Health Service and represents the official position of the U.S. Public Health Service on the science.

38. The three reports from 1967-69 were reviews of one year of published evidence. The 1967 report concluded that cigarette smoking was the most important cause of chronic non-neoplastic bronchopulmonary disease and was a cause of emphysema as well as chronic bronchitis. In 1968 the report concluded that cigarette smoking was a cause of

lung cancer in women and could contribute to the development of cardiovascular disease, particularly death from coronary artery disease.

39. The 1971 report was a comprehensive review of all of the evidence and laid the foundation for most of the diseases we know are caused by smoking. It concluded that cigarette smoking: is a significant risk factor contributing to the development of coronary heart disease, atherosclerosis of the aorta and coronary arteries, and increased mortality from cerebrovascular disease and nonsyphilitic aortic aneurysm; is a likely risk factor in the development of peripheral vascular disease; is the most important cause of chronic obstructive bronchopulmonary disease and increases the risk of dying from pulmonary emphysema and chronic bronchitis; causes lung cancer in men and women; is a significant factor in the causation of cancer of the larynx, oral cavity, and is associated with the development of cancer of the esophagus and cancer of the urinary bladder among men; and that maternal smoking during pregnancy exerts a retarding influence on fetal growth as manifested by decreased infant birth weight.

40. Additionally, the 1971 report concluded that high tar cigarette smokers had a higher risk of developing lung cancer.

41. The reports from 1972-1975 reinforced and extended these findings and the 1976 report was a compendium of chapters from previous reports. Small reports were produced for 1977 and 1978, but they are not usually considered part of the series.

42. The 1979 Report was produced when Joseph Califano became Secretary of the U.S. Department of Health Education and Welfare. It was once again a comprehensive review of all of the evidence on smoking and health. It extended prior reviews and among its conclusions were:

“Because of its high prevalence in the population, coronary heart disease is the chief contributor to the excess mortality among cigarette smokers followed by lung cancer and chronic obstructive lung disease. For the purposes of preventive medicine, it can be concluded that smoking is causally related to coronary heart disease for both men and women in the United States. The data collected from Western countries, particularly the United States, but also the United Kingdom, Canada, and others, show that smoking is one of three major independent risk factors for heart attack manifested as fatal and nonfatal myocardial infarction and sudden cardiac death in adult men and women. Moreover, the effect is dose-related, synergistic with other risk factors for heart attack, and of stronger association at younger ages. Smoking cigarettes is a major risk factor for arteriosclerotic peripheral vascular disease and death from arteriosclerotic aneurysm of the aorta. Women who smoke and use oral contraceptives are at a significantly elevated risk for fatal and nonfatal myocardial infarction.”

"In both men and women, cigarette smoking is causally related to lung cancer, cancer of the larynx, oral cancer, cancer of the esophagus, and there is a significant association between cigarette smoking and bladder cancer in both men and women. Cigarette smoking acts independently and synergistically with other factors to increase cancer of the kidney for men. Cigarette smoking is related to cancer of the pancreas."

"Maternal smoking is a direct cause of reduced birth weight, and increases the risk of fetal death, sudden infant death syndrome (SIDS) and maternal complications of pregnancy. Smoking during pregnancy may affect physical growth, mental development, and behavioral characteristics of children at least up to the age of 11."

43. In his Preface for the 1979 report, the Surgeon General discussed low tar cigarettes and stated "The preponderance of scientific evidence continues, as in 1966, to suggest that cigarettes with lower "tar" and nicotine are less hazardous.

44. Following the 1979 report many of the reports focused on specific topics. In 1980, the focus was on women and the report concluded that for most of the disease consequences of smoking the increase in risk produced by smoking was similar for men and women who had similar smoking behaviors. It also defined the increased risks for the mother and fetus when women smoked during pregnancy.

45. In 1981, the report focused on whether the disease risks of smoking were lower for smokers of filtered and lower machine measured yield cigarettes. Because the amount of information available in the published literature on that topic was so limited, the report was prepared through convening a conference of experts to consider the evidence and the issues. This limited evidence led to the unfortunate, and in retrospect mistaken, conclusion that smokers who were unable to quit were well advised to switch to cigarettes yielding less "tar" and nicotine, provided they did not increase their smoking or change their smoking in other ways. We now know that this conclusion was in error in two ways. First, the disease risks are not reduced for smokers who switch to lower yield cigarettes; and second, smokers who switch to lower yield cigarettes automatically and unconsciously change their smoking behaviors to restore their nicotine intake to a level sufficient to meet the needs of their nicotine addiction.

46. The 1982 report focused on cancer and concluded that cigarette smoking is the major cause of lung and laryngeal cancer in the United States, is a major cause of oral cancer and esophageal cancer and is a contributing factor in causing bladder, kidney and pancreatic cancer.

47. The 1983 report focused on cardiovascular disease and concluded that "Cigarette smoking is a major cause of coronary heart disease in the United States for both men and women. Because of the number of persons in the population who smoke and the increased risk that cigarette smoking represents, it should be considered the most important of the known modifiable risk factors for CHD." It also identified cigarette

smoking as a cause of aortic aneurysm and peripheral vascular disease, and concluded that women, while having lower absolute risks for cardiovascular disease, had similar increases in risk when compared to men if they smoked.

48. In 1984, the report focused on Chronic Obstructive Lung Disease (COLD) and concluded that "Cigarette smoking is the major cause of COLD morbidity in the United States; 80 to 90 percent of COLD in the United States is attributable to cigarette smoking."

49. The 1985 report focused on interactions of smoking and occupational exposures and concluded that "For the majority of American workers who smoke, cigarette smoking represents a greater cause of death and disability than their workplace environment. In those worksites where well-established disease outcomes occur, smoking control and reduction in exposure to hazardous agents are effective, compatible, and occasionally synergistic approaches to the reduction of disease risk for the individual worker."

50. The 1986 report focused on the risks for nonsmokers exposed to tobacco smoke and concluded that "Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers. The children of parents who smoke, compared with the children of nonsmoking parents, have an increased frequency of respiratory infections, increased respiratory symptoms, and slightly smaller rates of increase in lung function as the lung matures. Simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, exposure of nonsmokers to environmental tobacco smoke."

51. The 1988 report examined addiction and concluded that cigarettes and other forms of tobacco are addicting and that nicotine is the drug in tobacco that causes addiction.

52. The 1989 report was a 25-year retrospective on what had been accomplished in tobacco control efforts and the 1990 report examined the health benefits of cessation.

53. In the 1990s, the reports examined smoking in the Americas (1992), effect on youth (1994), tobacco use and risks in minority populations (1998) and the interventions that were effective in controlling tobacco use (2000).

54. In the last decade, the reports have revisited and extended our understanding of the risks for women (2001), the diseases caused by cigarette smoking (2004), the risks of second hand smoke exposure (2006) and the mechanism by which cigarette smoking causes disease (2010).

55. It was not until after 1998 that the tobacco industry acknowledged the disease consequences of cigarette smoking and nicotine addiction. Prior to that time the tobacco industry continued to deny publicly that there was sufficient scientific evidence to establish that cigarettes resulted in any disease risks.

VI. The evolution of the current public health understanding and public policy recommendations on the risks of low yield cigarettes

56. As a response to the growing health concerns of smokers and the fall in cigarette consumption in the 1950s, cigarette companies introduced and marketed filtered cigarettes and "low tar and nicotine" cigarettes in an effort to prevent smokers from quitting.¹³ The response by smokers was a shift in the type of cigarette smoked. Less than 3% of cigarettes sold were filtered in 1950 in the U.S., but over 50% were filtered by 1960 representing a dramatic response to the introduction and marketing of filtered cigarettes as products which could reduce health risks.¹⁴ Coincident with this marketing and shift to filters, the decline in smoking in the mid 1950s reversed, and subsequently per-capita consumption of cigarettes rose to new heights¹⁵ (see Fig.2).

57. Cigarette smoke is a complex aerosol conventionally divided into a particulate phase and a gas phase. The particulate phase is felt to contain a large fraction of the toxicants present in whole smoke and can be separated from the gas phase by passing it through a very fine (Cambridge) filter. This particulate phase, after removal of water and nicotine, is what is referred to as "tar". Most cigarette filters simply remove a fraction of the particulate matter in cigarette smoke and do little to selectively reduce the mix of toxicants in smoke. If smokers increase the size of their puffs, take more puffs or smoke more cigarettes, filters may not reduce the amount of smoke exposure to the smoker.

13 Memo by WL Dunn dated 3/5/1964 Legacy Tobacco Documents Library Bates numbers 1003700128/0133; A presentation by Helmut Wakeham dated 11/15/1961, Legacy Tobacco Documents Library Bates numbers 1000277423-1000277447; Memo to RN DuPuis and CV Mace dated 7/24/1958 Legacy Tobacco Documents Library Bates numbers CTRMN028307/8308; A presentation to the board of directors by the Operations Department dated 10/28/64 Legacy Tobacco Documents Library Bates numbers 1000277081-1000277085; A memo from Helmut Wakeham to Mr. CH Goldsmith dated March 7, 1968 Legacy Tobacco Documents Library Bates numbers 1001818588-1001818593; A memo from Dr. Wakeham to Mr. RR Millhiser dated 9/2/1970 Legacy Tobacco Documents Library Bates numbers 1003041103; Report titled PME Research 1972-1974 Legacy Tobacco Documents Library Bates numbers 0000012310-0000012346; A memo from H Wakeham to Mr. Hugh Cullman dated March 24, 1961 Legacy Tobacco Documents Library Bates number 1000861953; A memo by TS Osdene to WL Dunn dated 12/14/1978 Legacy Tobacco Documents Library Bates numbers 1000765073/5075; A report titled Smoking and Health; Significance of the Report of the Surgeon General's Advisory Committee to Philip Morris Incorporated dated 2/18/1964 Legacy Tobacco Documents Library Bates numbers 85869754/9767.

14 Burns, DM, Shanks, TG, Major, JM, Thun, MJ, Samet, J. Smoking Lower Yield Cigarettes and Disease Risks, in Burns, DM, Benowitz, NL, eds. Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine. Smoking and Tobacco Control Monograph, No. 13 USDHHS, PHS, NIH, NCI (2001).

15 Burns D., Lee L., Shen Z., Gilpin B., Tolley D., Vaughn J. and Shanks T. Cigarette Smoking Behavior in the United States. In: Changes in Cigarette-Related Disease Risks and Their Implication for Prevention and Control, Smoking and Tobacco Control Monograph No. 8, Burns D., Garfinkel L., and Samet J., Editors, USDHHS NIH NCI, Chapter 2, pp. 13-112, 1997.

58. The demonstration that cigarette "tar" painted on the backs of animals caused cancers coupled with the human epidemiological data showing that the amount of smoke exposure was related to lung cancer risk led to a scientific focus on "tar" as the cause of lung cancer. This focus led to what was called the "tar derby" in advertising claims by cigarette manufacturers. In the 1950s cigarette companies marketed a wide variety of brands with each being advertised as the "lowest" tar brand using different testing protocols and implying that these brands would be healthier.¹⁶ In response to these misleading claims to be the lowest tar brand, the FTC banned the use of tar and nicotine claims in marketing in 1960.

59. The skin painting studies in animals demonstrating that most of the carcinogenicity of tobacco smoke was in the particulate (tar) phase of the smoke, coupled with early epidemiological data suggesting that filter cigarette smokers had lower lung cancer risks, led several leading public health experts to suggest that cigarettes which delivered less tar to smokers might also generate less risk.¹⁷ They appealed to Congress and to the FTC to allow marketing claims for low tar cigarettes.

60. The Surgeon General adopted the position developed by a similar distinguished group of scientists in their report of a June 1, 1966 meeting.¹⁸ Their report stated: "The ad-hoc group of scientists which reviewed and discussed these data recently at the invitation of the Surgeon General concluded that: 1. The preponderance of scientific evidence strongly suggests that the lower the "tar" and nicotine content of cigarette smoke, the less harmful would be the effect. 2. We recommend to the Surgeon General that action be encouraged which will result in the progressive reduction of the "tar" and nicotine content of cigarette smoke." This report specifically noted that the group of scientists understood that "The potential benefit to the individual consumer who might shift to a lower tar and nicotine cigarette would be negated if this shift were accompanied by an increase in the number of cigarettes consumed, or in the length of each cigarette used." However, they also noted their belief that "There is evidence that, by-and-large, this does not occur; that the shift to low "tar" and nicotine cigarettes tends to be accompanied by the same level of consumption or an even lower level rather than by an increased consumption." Clearly this group of scientists recognized that compensation for reduced nicotine levels by increased smoking or changes in pattern of smoking could be a problem, but they believed that it was unlikely to occur.

61. In 1966, as a response to public health recommendations that lower tar cigarettes

16 Pollay RW and Dewhirst T. Marketing cigarettes with low machine-measured yields, in Burns, DM, Benowitz, NL, eds. Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine. Smoking and Tobacco Control Monograph, No. 13 USDHHS, PHS, NIH, NCI (2001).

17 U.S. Congress. Hearings before the Consumer Subcommittee of the Committee on Commerce. Senate, 90th Congress, August 23, 24, 1967, p.7; Public Health Service Technical Report on "Tar" and Nicotine following a meeting of scientists on June 1, 1966. Dated Nov 25, 1966. Legacy Tobacco Documents Library Bates numbers HK0507067/7070.

18 Public Health Service Technical Report on "Tar" and Nicotine following a meeting of scientists on June 1, 1966. Dated Nov 25, 1966. Legacy Tobacco Documents Library Bates numbers HK0507067/7070.

might reduce disease risks and in order to reduce the confusion produced by competing claims of the cigarette manufacturers about the tar deliveries of their cigarettes, the U.S. Federal Trade Commission promulgated standards for measurement of tar and nicotine using a standard machine smoking protocol¹⁹ and rescinded its ban on use of tar and nicotine yields in cigarette marketing. The FTC machine smoking protocol consisted of taking 35 ml puffs drawn over two seconds each minute until a specified but length was reached. This protocol does not reflect actual smoking patterns and tests all cigarettes with the same puff profile, even though it is recognized that smokers smoke cigarettes with different designs differently. Neither the FTC nor the public health community expected that the machine measured values using the FTC protocol would be accurate estimates of the smoke exposure of individual smokers smoking individual cigarettes because of the well recognized variability among smokers in how they smoked individual cigarettes. What measurements under the FTC protocol were expected to do was to identify cigarettes which, if smokers switched to them from higher tar cigarettes, would deliver less tar and nicotine. The expectation was that smokers who switched from a high tar brand to cigarettes with a low tar measurement would actually be exposed to less tar when they smoked, and that that lower tar exposure would result in less risk.

62. In 1979, the U.S. Surgeon General examined the evidence on low tar cigarettes and again endorsed them albeit with strong caveats reflecting the scientific uncertainties. Surgeon General Richmond concluded "The preponderance of scientific evidence continues, as in 1966, to suggest that cigarettes with lower "tar" and nicotine are less hazardous. It has become clear in the years since, however, that in presenting this information to the public three caveats are in order: Consumers should be advised to consider not only levels of "tar" and nicotine but also (when the information becomes available) levels of other tobacco smoke constituents, including carbon monoxide. They should be warned that, in shifting to a less hazardous cigarette, they may in fact increase their hazard if they begin smoking more cigarettes or inhaling more deeply. And most of all, they should be cautioned that even the lowest yield of cigarettes presents health hazards very much higher than would be encountered if they smoked no cigarettes at all, and that the single most effective way to reduce the hazards associated with smoking is to quit."²⁰

63. During the 1970s and early 1980s, there was an alternate scientific approach also directed at reducing tar exposure using the known compensation for nicotine in cigarette smoking. Researchers demonstrated that cigarettes with high levels of nicotine led to reverse compensation when they were smoked, that is smokers took smaller and fewer

19 Pillsbury, H.C. Review of the Federal Trade Commission Method for determining cigarette tar and nicotine yield. National Cancer Institute. *The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes. Smoking and Tobacco Control Monograph Number 7.* U.S. DHHS, National Institutes of Health, National Cancer Institute. NIH Publication No. 96-4028, pp. 9-14, 1996.

20 *Smoking and Health: A Report of the Surgeon General.* U.S. DHEW, Public Health Service, Office of the Assistant Secretary of Health, Office on Smoking and Health. DHEW Publication No. (PHS) 79-50066, 1979. Page xiv.

puffs and therefore received less tar. This led some members of the scientific and public health community to recommend that strains of tobacco with higher nicotine content be developed.²¹

64. The tobacco industry marketed tar and nicotine yields based on the FTC method to "reassure" smokers and to provide an alternative to quitting.²² Recently disclosed documents make it clear that the interests of tobacco companies in keeping their customers purchasing cigarettes led to extensive efforts to design cigarettes which would facilitate compensation by dramatically increasing the delivery to smokers when the cigarettes were smoked in a manner different from the machine smoking protocol but in accordance with the pattern of smoking that cigarette manufacturers knew would occur when they were actually smoked.²³

21 Russell, M.A.H., Wilson, C., Patel, U.A., Feyerabend, C., Cole, P.V. Plasma nicotine levels after smoking cigarettes with high, medium, and low nicotine yields. *British Medical Journal* 2(5968): 414-416, May 24, 1975; RUSSELL, M.A.H. The case for medium-nicotine, low-tar, low-carbon monoxide cigarettes. In: Gori, G.B., Bock, F.G. (Editors). *Banbury Report 3-A Safe Cigarette?* Cold Spring Harbor, New York, Cold Spring Harbor Laboratory, 1980, pp. 297-310.

22 Green, S.J. Research conference held at Hilton Head Island S.C. 24th-30th, September, 1968. Legacy Tobacco Documents Library Bates numbers 1112.01, p. 2, 1968; Pepples, E. Industry response to cigarette/health controversy. Memo dated 2/4/76. Legacy Tobacco Documents Library Bates numbers 2205.01; Teague, C. Research planning memorandum on a new type of cigarette delivering a satisfying amount of nicotine with a reduced "tar"-to-nicotine ratio. March 28, 1972. Legacy Tobacco Documents Library Bates numbers 502987394/7403; Wakeham, H. Trends in tar and nicotine deliveries over the last 5 years. Memo to Mr. Hugh Cullman. March 24, 1961. Legacy Tobacco Documents Library Bates numbers 1000861953; Report titled "Reaction to a Proposed New 85MM Benson & Hedges among current Benson & Hedges Smokers in Dallas" dated 8/28/1978 Legacy Tobacco Documents Library Bates numbers 1004891121-1004891134; Report titled "PME Research 1972-1974" Legacy Tobacco Documents Library Bates numbers 1000012310-1000012346; A memo by TS Osdene to WL Dunn dated 12/14/1978 Legacy Tobacco Documents Library Bates numbers 1000765073-1000765075; Chronology of Brown and Williamson Smoking and Health Research dated 10/25/88 Legacy Tobacco Documents Library Bates numbers IS401735-IS401769; Memo from Dr. BF Litzinger dated 1/19/1978 Legacy Tobacco Documents Library Bates number 650510607.

23 Report entitled "Some Unexpected Observations on Tar and Nicotine and Smoker Behavior" dated March 1, 1974 Legacy Tobacco Documents Library Bates numbers 1000260363-1000260380; Report entitled "Consumer Psychology" dated November 15, 1971 Legacy Tobacco Documents Library Bates numbers 1003288509-1003288511; Goodman, B. Effect of reduced dilution on tar delivery to a smoker. Memo by B. Goodman to L.F. Meyer of Philip Morris dated October 21, 1982. Legacy Tobacco Documents Library Bates numbers 1003415278/5280; Report titled "4009, Development Smoke Studies" dated November 29, 1982 Legacy Tobacco Documents Library Bates numbers 2060542656-2060542705; Goodman, B. Marlboro-Marlboro Lights study delivery data. Memo by Barboro Goodman to Leo F. Meyer dated 9/17/75 Legacy Tobacco Documents Library Bates numbers 2021544486-2021544496; A report titled 4009 Development Smoke Studies dated 6/17/1981 Legacy Tobacco Documents Library Bates numbers 22023780499/05229; Report titled "PME Research 1972-1974" Legacy Tobacco Documents Library Bates numbers 1000012310-1000012346; Memo to H. Wakeham from R. Fagan titled Moral issue on FTC tar and dated 3/7/1974 Legacy Tobacco Documents Library Bates numbers 2084327397/7398; Report titled "Behavioral Research 1600" dated 7/19/1982 Legacy Tobacco Documents Library Bates numbers 2501303107-2501303153; Memo to RB Seligman dated 2/4/1981 Bates number 2050942877/2908; Report titled "Smoking Behavior Real World Observations" dated March 1973 Legacy Tobacco Documents Library Bates numbers 1000353356-1000353410; Wakeham, H. Trends in tar and

65. The standardized protocol for machine testing uses a fixed puff volume and draw rate and specified inter-puff intervals. While a variety of characteristics of a cigarette can contribute to lowering the tar and nicotine yields, the principal engineering change that allows low yield cigarettes to be produced is the addition of ventilation holes in the cigarette filters. Placing ventilation holes in the filter simply replaces some, or most, of the smoke in the machine puff with air entrained through the ventilation holes thereby lowering the tar and nicotine yield in proportion to the amount of air entrained. The smoking machines, by protocol, do not alter their smoking pattern in response to this dilution of the smoke; but smokers are smoking to obtain nicotine not air, and when the smoke is diluted they increase their puff volume and frequency or otherwise alter their smoking pattern to return their nicotine intake to that needed to satisfy their addiction. These changes in pattern of smoking are referred to as compensation. The engineering changes producing ventilation holes in cigarette filters take advantage of the known compensatory changes among smokers such that so called "low tar" cigarettes yield very low levels of tar and nicotine when smoked by machine but much higher levels of tar and nicotine when smoked by smokers.²⁴

66. Unaware of the tobacco industry's effort to engineer cigarettes with an elasticity of delivery, the public health community recommendation that smokers who could not quit would benefit from switching to low tar and filtered cigarettes persisted through the 1970s and early 1980s and is typified by the 1981 U.S. Surgeon General's recommendation "Overall, our judgment is unchanged from that of 1966 and 1979: smokers who are unwilling or as yet unable to quit are well advised to switch to cigarettes yielding less "tar" and nicotine, provided they do not increase their smoking or change their smoking in other ways."²⁵

67. The recommendations to switch to low yield and filtered cigarettes were part of a generalized set of recommendations to reduce tar exposure as a means of reducing risk in those who could not quit. For example, in 1975 a World Health Organization (WHO) expert committee recommended that smokers who could not quit reduce their dosage of smoke by: smoking fewer cigarettes, inhaling less, leaving a longer stub, taking fewer

nicotine deliveries over the last 5 years. Memo to Mr. Hugh Cullman. March 24, 1961. Legacy Tobacco Documents Library Bates numbers 1000861953; A memo by R Fagan to Dr. H Wakeham dated 9/2/1970 Legacy Tobacco Documents Library Bates numbers 1000320564-1000320565.

24 Report entitled "Some Unexpected Observations on Tar and Nicotine and Smoker Behavior" dated March 1, 1974 Legacy Tobacco Documents Library Bates numbers 1000260363-1000260380; Report entitled "Consumer Psychology" dated November 15, 1971 Legacy Tobacco Documents Library Bates numbers 1003288509-1003288511; Goodman, B. Effect of reduced dilution on tar delivery to a smoker. Memo by B. Goodman to L.F. Meyer of Philip Morris dated October 21, 1982. Legacy Tobacco Documents Library Bates numbers 1003415278/5280; Memo by Barboro Goodman to Leo F. Meyer dated 9/17/75 Legacy Tobacco Documents Library Bates numbers 2021544486-2021544496; A report titled 4009 Development Smoke Studies dated 6/17/1981 Legacy Tobacco Documents Library Bates numbers 22023780499/05229.

25 *The Health Consequences of Smoking: The Changing Cigarette*. A Report of the Surgeon General. U.S. DHHS, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health. DHHS publication No. 81-50156, 1981. Page V5.

puffs from each cigarette and taking the cigarette out of the mouth during puffs. They also recommended that smokers who could not quit switch to lower tar and nicotine cigarettes as a means of reducing their exposure and risk.²⁶

68. The recommendations endorsed by WHO on lowering exposure were also provided to Canadian smokers in a series of press releases by the Minister of National Wealth and Welfare in association with the release of machine measured values of tar and nicotine for Canadian brands of cigarettes from 1968-1980²⁷. These press releases also cautioned that the machine measured values did not measure the exposure that individual smokers would receive when smoking these brands, that there was no safe cigarette or safe level of smoking, and urged smokers to quit as the best method of reducing their risks. The messages contained in these press releases reflect the best scientific information available to the public health authorities at the time.

69. These recommendations about reducing dose among those who could not quit were a prominent companion to the smoking cessation messages during the 1970s and early 1980s. However, even with a continued acceptance of the mistaken scientific belief that low tar cigarettes resulted in less harm to smokers, the public health recommendations began to drop any mention of shifting to filtered or low tar cigarettes in the mid 1980s. This occurred, not because of a concern that the disease risks were not reduced with use of low tar cigarettes, but because of a growing recognition that providing an alternative to cessation with low tar cigarette use diminished the effectiveness of cessation messages and ran the risk of encouraging smokers to continue smoking. As an example, in the 1988 U.S. Surgeon General's report on nicotine addiction the recommendations for reducing risk focus exclusively on cessation and do not discuss switching to low tar cigarettes as an option.²⁸ This shift in recommendations occurred despite a continuing scientific consensus that low tar cigarettes did reduce disease risks in smoker who used them. That consensus persisted into the mid 1990s.²⁹

70. The shift toward recommending cessation and not making recommendations about reducing their smoke exposure through changing the pattern of smoking was also evident in press releases by the Minister of National Health and Welfare after 1980³⁰;

26 WHO. *Smoking and its Effects on Health: Report of a WHO Expert Committee*. Technical Report Series 568. World Health Organization, Geneva Switzerland. 1975.

27 Press releases from the Minister of National Health and Welfare numbered 1968-104, 1969-80, 1969-147, 1970-72, 1971-17, 1973-13, 1973-145, 1974-34, 1974-105, 1979-96, 1980-7.

28 *The Health Consequences of Smoking: Nicotine Addiction: A Report of the Surgeon General*. U.S. DHHS, Public Health Service, Centers for Disease Control, Center for Health Promotion and Education, Office on Smoking and Health. DHHS Publication No. (DC) 88-8406, 1988.

29 Jonathan M. Samet JM. *The Changing Cigarette and Disease Risk: Current Status of the Evidence*. Chapter 6 in National Cancer Institute *Smoking and Tobacco Control Monograph #7. The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of US. Cigarettes Report of the NCI Expert Committee*. USDHHS, PHS, NIH, NCI (1976).

30 Press releases from the Minister of National Health and Welfare numbered 1981-1, 1982-11, 1983-10, 1984-04, 1984-06, 1984-56, 1985-51, 1986-02, 1987-02.

and these press releases often cautioned that, if smokers who switched to lower yield brands smoked more intensely, they might increase their actual exposure and risk on switching.

71. Epidemiological studies from the late 1960's onward, and reviewed in Monograph 13, suggested that populations of smokers who chose to smoke lower tar or filtered cigarettes had lower lung cancer risks, but not lower risks of other diseases caused by smoking.³¹ These findings were particularly exciting at that time since smokers had been smoking these reduced-yield cigarettes for only short periods of time and, as more individuals used these products for longer periods of time, the reduction in disease risk would be expected to increase and national lung cancer death rates would fall.

72. The reduction in lung cancer rates from the use of filtered and lower yield cigarettes expected from the epidemiological studies did not occur in U.S. national lung cancer death rate trends.

73. Prospective mortality studies of smokers in the United States and the United Kingdom revealed an increase, rather than a decrease, in the risk of smoking over a period when tar and nicotine yields of cigarettes were declining.³² Data from two large prospective mortality studies conducted by the American Cancer Society (ACS) more than 20 years apart (from 1959 to 1966 and from 1982 to 1988) are particularly compelling.³³ Machine-measured tar and nicotine yields of U.S. cigarettes declined dramatically in the interval between these two studies, and the machine-measured yields of the cigarettes actually smoked by the participants in these two studies were dramatically different as a result. Despite the substantive reduction in tar yield of the cigarettes smoked in CPS-II, lung cancer disease risks in CPS-II increased rather than decreased in comparison to CPS-I, even when controlled for differences between the two studies in number of cigarettes smoked per day and duration of smoking. Lung cancer

31 National Cancer Institute. *The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes. Smoking and Tobacco Control Monograph Number 7*. U.S. DHHS, National Institutes of Health, National Cancer Institute. NIH Publication # 96-4028. 1996; U.S. Department of Health and Human Services. *The Health Consequences of Smoking: The Changing Cigarette. A Report of the Surgeon General*. U.S. DHHS, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health. DHHS publication No. 81-50156, 1981; Institute of Medicine. *Clearing the Smoke: The Science Base for Tobacco Harm Reduction*. Kathleen Stratton, Padma Shety, Robert Wallace, and Stuart Bondurant, Editors, Committee to Assess the Science Base for Tobacco Harm Reduction. Board on Health Promotion and Disease Prevention. Institute of Medicine, National Academy of Sciences, National Academy Press, 2001; Burns, DM, Shanks, TG, Major, JM, Thun, MJ, Samet, J. Smoking Lower Yield Cigarettes and Disease Risks, in Burns, DM, Benowitz, NL, eds. *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine*. Smoking and Tobacco Control Monograph, No. 13 USDHHS, PHS, NIH, NCI (2001).

32 Thun, M.J., Heath, C.W. Changes in mortality from smoking in two American Cancer Society prospective studies since 1959. *Preventive Medicine* 26:422-426. 1997; Doll, R., Peto, R., Wheatley, K., Gray, R., Sutherland, I. Mortality in relation to smoking: 40 years' observations on male British doctors. *British Medical Journal* 309:901-911, 1994.

33 Thun, M.J., Heath, C.W. Changes in mortality from smoking in two American Cancer Society prospective studies since 1959. *Preventive Medicine* 26:422-426. 1997.

risks for never smokers did not change between the two studies. Thus, there has been an increase rather than a decrease in the carcinogenicity of smoking over the last several decades in the United States in spite of the reduction in tar yields and other design changes in the cigarettes manufactured over that interval.

74. Use of lower-yield cigarettes did grow until they were the dominant type of cigarette on the U.S. market, and more than 97 percent of the cigarettes sold in the United States were filtered cigarettes by the end of the century. However, lung cancer rates continued to rise. U.S. lung cancer death rates finally peaked in 1990 among white males (almost 40 years after the widespread adoption of filtered cigarette use), and they continued to rise among women until recently in spite of their higher prevalence of low-yield cigarette use.³⁴

75. The disparity between the changes expected and the observed death rates raised questions about whether the changes in cigarette design had in fact reduced disease risks and led to the reconsideration of these issues reflected in Monograph 13.

76. By the late 1990s the concerns described in the preceding paragraphs raised questions about the scientific validity of the public health recommendations that lower tar cigarettes offered less risk. At the same time a substantial body of internal tobacco industry documents became available through discovery in U.S. litigation, and these documents provided a deeper and more detailed understanding of how cigarettes were engineered and what the companies understood about how their products would perform.

77. The tobacco companies recognized that cigarettes needed to deliver a sufficient dose of nicotine in order to satisfy the smoker, and not delivering that dose would result in cigarettes that smokers would not use. However, they also understood that the smoker would change their smoking behavior in predictable ways to compensate for changes in cigarette design, largely filter ventilation holes, which reduced machine yield. Using this understanding of cigarette design and smoker response, the companies designed and developed cigarettes that could be marketed based on low machine measurements in order to reassure smokers that they were reducing their exposure while actually providing a full dose of smoke when used as the companies knew they would be used.

78. Specifically, the internal industry documents demonstrated that cigarette manufacturers understood smokers would not smoke cigarettes that did not deliver sufficient nicotine; how smokers would compensate to get that nicotine; and that cigarettes were designed with that understanding of how smokers would compensate so that the smoker would get a full dose of nicotine no matter what the machine yield was. A wealth of documents describing these issues exists and a few are provided as illustrations.

79. A Philip Morris research paper/proposal³⁵ titled "How Much Smoke Does the

34 Wingo, P.A., Ries, L.A.G., Giovino, G.A., Miller, D.S., Rosenberg, H.M., Shopland D.R., Thun, M.J., Edwards, B.K. Annual Report to the Nation on the Status of Cancer, 1973–1996, with a Special Section on Lung Cancer and Tobacco Smoking. *Journal of the National Cancer Institute* 91:675-690, 1999.

35 Undated Document, Legacy Tobacco Documents Library Bates numbers 1003294969/4971(PM)

Smoker Get?" concludes with the following implications:

"1. The smoker will get what he wants regardless of what the cigarette delivers.

2.

3. There is a limit to how far we can go in lowering tar content in the smoke. Up to a point he'll tolerate reductions in delivery because he can regulate by changing his puffing and inhaling patterns, but if it gets so low that even by these methods he can't get his dose, he won't smoke it."

80. A "Private and Confidential" BAT report³⁶ titled "Notes on the Group Research & Development Conference at Duck Key, Florida" summarized BAT Group members' discussions at a January 1974 conference including the following item: "The Kippa study in Germany suggests that whatever the characteristics of cigarettes as determined by smoking machines, the smoker adjusts his pattern to deliver his own nicotine requirements."

81. This concept was translated into cigarette design as demonstrated by a September 21, 1977 memorandum³⁷ to P.L. Short titled "Compensation". BATCo's F. Haslam reported that he and fellow employees Jeremy Wood and Ian Ayres "agreed that it should now be possible to design a number of cigarettes which would have the same smoking machine delivery but different deliveries to the compensating smoker."

82. With respect to cigarette design, Colin Greig from BATCo wrote³⁸ that: "Given the design parameters of the cigarettes, it is possible to speculate that human compensation has, for a significant part of the smoking population, negated attempts to reduce tar deliveries." He then proposed the need for a "compensable" cigarette that could be smoked more intensely to obtain more nicotine when needed. Greig specifically proposed a product that offered 'elasticity of delivery' achieved through 'non-obvious cigarette design features': What would seem very much more sensible, is to produce a cigarette which can be smoked at a certain tar band, but which, in human hands, can exceed this tar banding."

83. BATCo researcher D.E. Creighton wrote a document³⁹ titled "Structured Creativity Group Presentation" in which he evaluated the then current state of the cigarette industry and its products. Creighton acknowledges that, "Most studies of smokers indicate that a large number will compensate for reduced delivery by increasing

36 Legacy Tobacco Documents Library Bates numbers 680048892/8897 (BATCo)

37 Legacy Tobacco Documents Library Bates number 100236543 (BATCo)

38 Legacy Tobacco Documents Library Bates numbers 100515899-5910 (BATCo)

39 Undated Document, Legacy Tobacco Documents Library Bates numbers 102690336-0350 (BATCo)

the amount of smoke taken from a cigarette with lower delivery.” With respect to cigarette design, he writes: “Cigarettes with compensable filters will be developed. Such products will have low delivery when smoked under standard conditions, but, being velocity sensitive, a smoker may readily take higher delivery than the standard delivery, if he so wishes.” This document demonstrates an understanding that the low tar cigarette designs have deliveries that increase dramatically when the “velocity” of the puff (puff draw rate) increases, allowing smokers to derive whatever amount of nicotine he or she desires from these “elastic” cigarettes.

84. The result of this thinking as implemented at Philip Morris was demonstrated in an internal report⁴⁰ dated September 17, 1975, from Barbro Goodman to Leo Meyer. Goodman reported on “smoker profile data” obtained using a device called a “Smoker Simulator.” Goodman’s study compared data of Marlboro 85 smokers to data for the same smokers when switched to the lower yield product Marlboro Lights. Goodman concluded that: “In effect, the Marlboro 85 smokers in this study did not achieve any reduction in smoke intake by smoking a cigarette (Marlboro Lights) normally considered lower in delivery.”

85. The availability of the internal tobacco industry documents on cigarette engineering and the increasing awareness that the expected reductions in lung cancer risk were not manifesting in national lung cancer death rate statistics led the FDA to request a comprehensive review of the science from the U.S. National Cancer Institute. That review was published in 2001 as Smoking and Tobacco Control Monograph #13 Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine.⁴¹

86. The overall conclusions of Monograph 13 are:

1. Epidemiological and other scientific evidence, including patterns of mortality from smoking-caused diseases, does not indicate a benefit to public health from changes in cigarette design and manufacturing over the last fifty years.
2. For spontaneous brand switchers, there appears to be complete compensation for nicotine delivery, reflecting more intensive smoking of lower yield cigarettes.
3. Widespread adoption of lower yield cigarettes in the United States has not prevented the sustained increase in lung cancer among older smokers.
4. Many smokers switch to lower yield cigarettes out of concern for their health, believing these cigarettes to be less risky or to be a step toward quitting.

40 Legacy Tobacco Documents Library Bates numbers 2023779189-9201 (PM)

41 Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine, Smoking and Tobacco Control Monograph, No. 13. Burns D. and Benowitz N.L., editors. USDHHS, NIH, NCI, NIH Pub. No. 02-5047, 2001.

Advertising and marketing of lower yield cigarettes may promote initiation and impede cessation, more important determinants of smoking related diseases.

5. Measurements of tar and nicotine yields using the FTC method do not offer smokers meaningful information on the amount of tar and nicotine they will receive from a cigarette. The measurements also do not offer meaningful information on the relative amounts of tar and nicotine exposure likely to be received from smoking different brands of cigarettes.

The conclusions of the chapter on disease risk (chapter 4) for Monograph 13 are:

1. Changes in cigarette design and manufacturing over the last fifty years have substantially lowered the sales-weighted, machine-measured tar and nicotine yields of cigarettes smoked in the United States.

2. Cigarettes with low machine-measured yields by the FTC method are designed to allow compensatory smoking behaviors that enable a smoker to derive a wide range of tar and nicotine yields from the same brand, offsetting much of the theoretical benefit of a reduced-yield cigarette.

3. Existing disease risk data do not support making a recommendation that smokers switch cigarette brands. The recommendation that individuals who cannot stop smoking should switch to low yield cigarettes can cause harm if it misleads smokers to postpone serious efforts at cessation.

4. Widespread adoption of lower yield cigarettes by smokers in the United States has not prevented the sustained increase in lung cancer among older smokers.

5. Epidemiological studies have not consistently found lesser risk of diseases, other than lung cancer, among smokers of reduced yield cigarettes. Some studies have found lesser risks of lung cancer among smokers of reduced yield cigarettes. Some or all of this reduction in lung cancer risk may reflect differing characteristics of smokers of reduced-yield compared to higher-yield cigarettes.

6. There is no convincing evidence that changes in cigarette design between 1950 and the mid 1980s have resulted in an important decrease in the disease burden caused by cigarette use either for smokers as a group or for the whole population.

87. The position stated in Monograph 13 is consistent with the reviews of the evidence by the Institute of Medicine⁴², The World Health Organization's Scientific

42 Institute of Medicine. Clearing the Smoke: The Science Base for Tobacco Harm Reduction. Kathleen Stratton, Padma Shetye, Robert Wallace, and Stuart Bondurant, Editors, Committee to Assess the Science Base for Tobacco Harm Reduction. Board on Health Promotion and Disease Prevention. Institute of Medicine, National Academy of Sciences, National Academy Press, 2001.

Advisory Committee on Tobacco⁴³, the Canadian Expert Committee⁴⁴ and the 2004⁴⁵ and 2010⁴⁶ U.S. Surgeon General's Reports. These positions are succinctly articulated by the 2004 Surgeon General's report which concluded in the Message from the Secretary of Health and Human Services at the front of that report:

"Changes in cigarettes that reduce machine yields of tar and nicotine have not had any clear benefit for public health."⁴⁷

And the third major conclusion of that report reads:

"Smoking cigarettes with lower machine-measured yields of tar and nicotine provides no clear benefit to health."

88. The 2010 report⁴⁸ concluded: "The evidence indicates that changing cigarette designs over the last five decades, including filtered, low-tar, and "light" variations, have not reduced overall disease risk among smokers and may have hindered prevention and cessation efforts."

89. In 2001 Canadian Health Minister Allan Rock set up a ministerial advisory council (MAC) on tobacco control which he then asked for advice on the topic of light and low tar cigarettes. His MAC then called an international panel together, which in turn made recommendations which achieved ministerial support. The issue lapsed with a change of minister. The international expert panel convened in Quebec in 2001 led to a

43 Scientific Advisory Committee on Tobacco Product Regulation (SACTob). Recommendation on health claims derived from ISO/FTC method to measure cigarette smoke. World Health Organization. Geneva, Switzerland. 2002.

44 Putting an end to deception. Proceedings of the International Expert Panel on cigarette descriptors, Quebec 2001. A report to the Canadian Minister of Health from the Ministerial Advisory Council on Tobacco Control. Ottawa; Canadian Council for Tobacco Control. January 2002.

45 *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

46 *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.

47 *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

48 *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.

report which explained how tar levels underreport actual yields, how cigarettes are engineered to attain low machine ratings without comparable reductions in deliveries to smokers, and canvassed possible remedies⁴⁹. It recommended that regulations be enacted: to totally ban light and mild descriptors; and also ban possible replacement terms; to remove tar numbers from packs; and that the public be (re-) educated on the nature and causes of the deception. It should be noted that the Canadian panel's recommendations were based on a review of the evidence and preceded the NCI Monograph 13 and the change in position of the U.S. Surgeon General.

90. The World Health Organization Framework Convention on Tobacco Control, an international treaty on the regulation and control of tobacco products, recommends a ban on misleading terms such as mild and light⁵⁰.

91. The current public health recommendations do not recommend that smokers switch cigarette brands based on FTC machine-measured tar and nicotine yields as a means of reducing future disease risks. The U.S. FTC, recognizing this current public health consensus on the absence of a benefit for low tar cigarettes, has rescinded its guidance on tar and nicotine yields stating:

“Today, however, the scientific consensus is that machine-based measurements of tar and nicotine yields based on the Cambridge Filter Method do not provide meaningful information on the amounts of tar and nicotine smokers receive from cigarettes, and that the test method is sufficiently flawed to make statements of tar and nicotine yields as measured by the method unlikely to help consumers make informed decisions. Thus, the underlying premise of the 1966 guidance is no longer valid.

In addition, the Commission believes the statements of tar and nicotine yields as measured by this test method are confusing at best, and are likely to mislead consumers who believe they will get proportionately less tar and nicotine from lower-rated cigarettes than from higher-rated brands. The Commission will not allow its stamp of approval on a test method that is confusing or misleading to consumers.”⁵¹

92. I was an editor for the 1981 Surgeon General's Report on the changing cigarette and I was also an editor of the 2001 NCI Monograph 13, and so I am in a position to offer a perspective on how the scientific evidence changed between the time of these two

49 Putting an end to deception. Proceedings of the International Expert Panel on cigarette descriptors, Quebec 2001. A report to the Canadian Minister of Health from the Ministerial Advisory Council on Tobacco Control. Ottawa: Canadian Council for Tobacco Control. January 2002.

50 <http://whqlibdoc.who.int/publications/2003/9241591013.pdf>

51 November 26, 2008, FTC Rescinds Guidance from 1966 on Statements Concerning Tar and Nicotine Yields. <http://www.ftc.gov/opa/2008/11/cigarettestesting.shtm>

volumes to generate the very different set of scientific conclusions contained in the two reports. Over the 20 year interval the following changes in scientific understanding occurred:

- a. Scientific understanding of the role of nicotine in smoking behavior changed. Nicotine was recognized as addictive and smokers were recognized as attempting to preserve nicotine levels by changing their pattern of puffing due to stimulation of nicotine receptors in the throat. Smokers change their pattern of puffing within a single cigarette based on the nicotine delivered to the mouth. In 1981 it was thought that smokers had a pattern of smoking that was defined by habit and would change only modestly based on the resistance characteristics of the cigarette.
- b. It was recognized that most cigarettes contained similar amounts of nicotine in the unburned tobacco independent of wide variations in their machine-measured yield. Because similar amounts of nicotine are present smokers can derive as much nicotine as they need by changing the pattern of smoking independent of the nominal nicotine yield.
- c. It had been known for a long time that smokers changed the way that they smoked when provided less nicotine in ways that would increase their intake of nicotine and this was called compensation. What was not known, and what was new science between 1981 and 2001, was that the extent of compensation was essentially complete. Population studies of smokers show essentially no difference in nicotine intake as the cigarettes smoked varied from low to high in their machine-measured nicotine yields demonstrating that, at the population level, compensation was essentially complete.
- d. Internal tobacco industry documents demonstrated that cigarettes were engineered to have an elasticity of delivery so that smokers could derive from them whatever level of nicotine they desired independent of the nominal nicotine yield.
- e. Internal tobacco industry documents demonstrated that the manufacturers were aware of how smokers would change their patterns of smoking when they switched to low yield cigarettes and that low tar cigarettes were designed to deliver full doses of nicotine when smoked with this different pattern.
- f. The fall in lung cancer death rates in the U.S. population expected from the switch to filtered cigarettes in the 1950s and to low tar cigarettes in the 60s and 70s did not occur.
- g. Large prospective mortality studies demonstrated an increase rather than a decrease in lung cancer mortality among smokers (but not among nonsmokers) during the period where smokers switched to filtered and low

tar cigarettes, raising the question of whether the risk of smoking may have increased rather than decreased with the changes in cigarette design.

- h. A re-evaluation of the epidemiological studies cited in Monograph 13 which found lower lung cancer risks in smokers of filtered and low tar cigarettes revealed that they used a flawed methodology to control for differences in the intensity of smoking between groups of smokers.

The use of cigarettes smoked per day (CPD) to control for the intensity of smoking may have mis-specified that variable as a measure of intensity. In lay terms, what mis-specification means is illustrated by the example of a smoker who switches from a high tar cigarette to a low tar cigarette but derives the same amount of nicotine (and tar) by increasing the number of cigarettes smoked from 20 to 25. The amount of tar and nicotine received is identical and therefore there is no difference in risk. However, this smoker would on average have less smoke exposure and risk than smokers who smoked 25 high tar cigarettes (i.e. we know that the risk is greater in smokers of 25 cigarettes than in smokers of 20 cigarettes).

In the epidemiological studies, the smoker in the example would be compared to 25 high tar cigarettes per day smokers not to the 20 high tar cigarette smoker group he would have been in prior to switching. Those 25 per day high tar smokers would have a higher intensity of smoking than individuals who smoked 20 high tar cigarettes and would therefore also have higher risk.

The question being asked in the study is not whether more intense smokers have greater risk (we know they do) but rather whether when someone of a specific intensity switches to low tar cigarettes does their risk change. Since the studies are conducted comparing groups of individuals who smoke different types of cigarettes and who also may have different average intensities as groups, it is necessary to control for the potential differences in intensity of smoking and that is done by using CPD as a control variable.

In order to compare the effect of switching, the correct comparison for the individual in the example should be 25 low tar cigarettes to 20 high tar cigarettes since that is what that individual smoked based on his own intensity prior to switching to low tar cigarettes. However, the epidemiological studies compared the individual in the example to smokers of 25 high tar cigarettes and these 25 CPD smokers have higher lung cancer risks than the individual would have had if he had not switched (i.e. when smoking 20 high tar CPD) or after he switched (i.e. when smoking 25 low tar CPD) since the exposure and risk for the individual in the example was defined by the smoke he received and that did not change.

The result is the appearance of a risk reduction with shifting to low tar cigarettes when one is not actually occurring. Understanding this limitation of the epidemiology was a critical step in understanding why the epidemiology showed that a risk reduction should have occurred at the population level but none appeared in the actual lung cancer death rates in the population.

These advances in the scientific evidence led to the conclusions of Monograph 13, and those conclusions have now been examined and validated by a number of other authorities.

93. The U.S. Congress has also recognized the scientific consensus on the absence of a reduction in disease risks with the use of low tar cigarettes in recent legislation giving the Food and Drug Administration jurisdiction over tobacco products. That legislation explicitly banned the use of descriptors such as light, mild or low tar in the naming of tobacco brands and the marketing of cigarette products.⁵² In the findings of the bill it lists:

(38) As the National Cancer Institute has found, many smokers mistakenly believe that “low tar” and “light” cigarettes cause fewer health problems than other cigarettes. As the National Cancer Institute has also found, mistaken beliefs about the health consequences of smoking “low tar” and “light” cigarettes can reduce the motivation to quit smoking entirely and thereby lead to disease and death.

(39) Recent studies have demonstrated that there has been no reduction in risk on a population-wide basis from “low tar” and “light” cigarettes, and such products may actually increase the risk of tobacco use.

(40) The dangers of products sold or distributed as modified risk tobacco products that do not in fact reduce risk are so high that there is a compelling governmental interest in ensuring that statements about modified risk tobacco products are complete, accurate, and relate to the overall disease risk of the product.

94. It is particularly worth noting that much of the tobacco industry evidence cited above was generated in the early and mid 1970s, often five or more years before the 1981 Surgeon General’s report on the changing cigarette was released endorsing the benefit of switching to low yield cigarettes.

VII. Conclusions

95. Over the past six decades an extensive body of scientific evidence has established

52 Public Law 111-31—June 22, 2009, Family Smoking Prevention and Tobacco Control and Federal Retirement Reform
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_public_laws&docid=f:publ031.111.pdf

that cigarette smoking is the largest preventable cause of morbidity and mortality in U.S., Canada, U.K, France and other developed countries.

96. In 1981, the U.S. Surgeon General clearly expressed a concern about reduced yield smoking leading to compensatory increases in smoking behaviors, but at that time the governmental and public health community was not aware of the extent and immediate role of nicotine addiction in altering puffing behavior, the elasticity of delivery designed into cigarettes then on the market which facilitated compensation on the part of the smoker, or the observations made by the industry that showed compensation was essentially complete for some "light" cigarettes. The recommendation by the U.S. Surgeon General was similar to those of many other health agencies including the Canadian government, and all of these agencies were unaware of the internal tobacco industry research prior to the mid 1990s. As one of the scientific editors of the 1981 Surgeon General's report, it is my expert opinion that, had all of the information available to the tobacco industry and described in part above, been available to the scientists preparing the 1981 Surgeon General's report, that report would not have drawn the erroneous conclusion that lower tar cigarettes produced lower risk or have made the recommendation that smokers who could not quit were "well advised to switch to cigarettes yielding less "tar" and nicotine".

97. Marketing of light cigarettes as delivering less tar, and by implication less risk, has resulted in many smokers who switched from higher yield cigarettes reporting that they did so in an attempt to reduce disease risk.⁵³ Many smokers also switch to lower yield cigarettes as part of an effort to quit or substantially reduce their smoking. The existing evidence suggests that smokers of low tar cigarettes are not more likely to quit successfully than those who do not switch.⁵⁴ Smokers who delay cessation by switching to lights face an increasing disease risk instead of the decreased disease risk that would have occurred through cessation. This is a real harm caused by low tar cigarettes.

98. It is my expert opinion the changes in cigarettes that resulted in a lowering of the FTC tar and nicotine yields over the past fifty years have not resulted in a reduction in the

53 Giovino, G.A., Tomar, S.L., Reddy, M.N., Peddicord, J.P., Zhu, B.P., Escobedo, L.G., Eriksen, M.P. Attitudes, knowledge, and beliefs about low-yield cigarettes among adolescents and adults. National Cancer Institute. *The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes. Smoking and Tobacco Control Monograph Number 7*. U.S. DHHS, National Institutes of Health, National Cancer Institute. NIH Publication # 96-4028. pp. 39-57, 1996; Report titled "Reaction to a Proposed New 85MM Benson & Hedges among current Benson & Hedges Smokers in Dallas" dated 8/28/1978 Bates number 1004891121-1004891134; Tindle HA, Rigotti NA, Davis RB, Barbeau EM, Kawachi I, Shiffman S. Cessation among smokers of "light" cigarettes: results from the 2000 national health interview survey. *Am J Public Health*. 2006 Aug;96(8):1498-504.

54 Giovino, G.A., Tomar, S.L., Reddy, M.N., Peddicord, J.P., Zhu, B.P., Escobedo, L.G., Eriksen, M.P. Attitudes, knowledge, and beliefs about low-yield cigarettes among adolescents and adults. National Cancer Institute. *The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes. Smoking and Tobacco Control Monograph Number 7*. U.S. DHHS, National Institutes of Health, National Cancer Institute. NIH Publication # 96-4028. pp. 39-57, 1996; Hughes J. Do "Light" Cigarettes Undermine Cessation? *Tobacco Control* 2001;10(Suppl I):i41-i42; Hyland A, Hughes JR, Farrelly M, Cummings KM. Switching to lower tar cigarettes does not increase or decrease the likelihood of future quit attempts or cessation. *Nicotine Tob Res*. 2003 Oct;5(5):665-71.

disease risks of smoking cigarettes for the smokers who use these cigarettes.

99. The public policy decisions and advice to Canadian smokers, reflected in the press releases issued by the Minister of National Health and Welfare referred to previously, were in conformity with the best scientific evidence available to public health authorities at the time and were consistent with those actions taken by other competent public health authorities in other countries such as the U.S. and in international health organizations such as WHO.



DAVID M. BURNS, M.D.
October 28, 2011

Figure 1. Per-Capita Consumption of Different Forms of Tobacco in the US 1880-2006

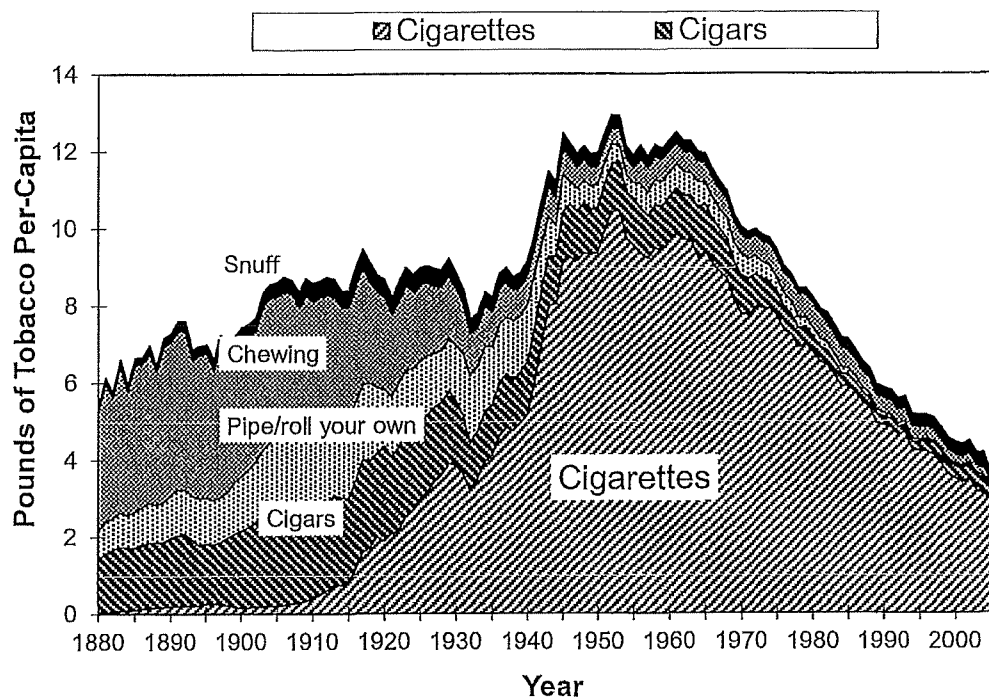
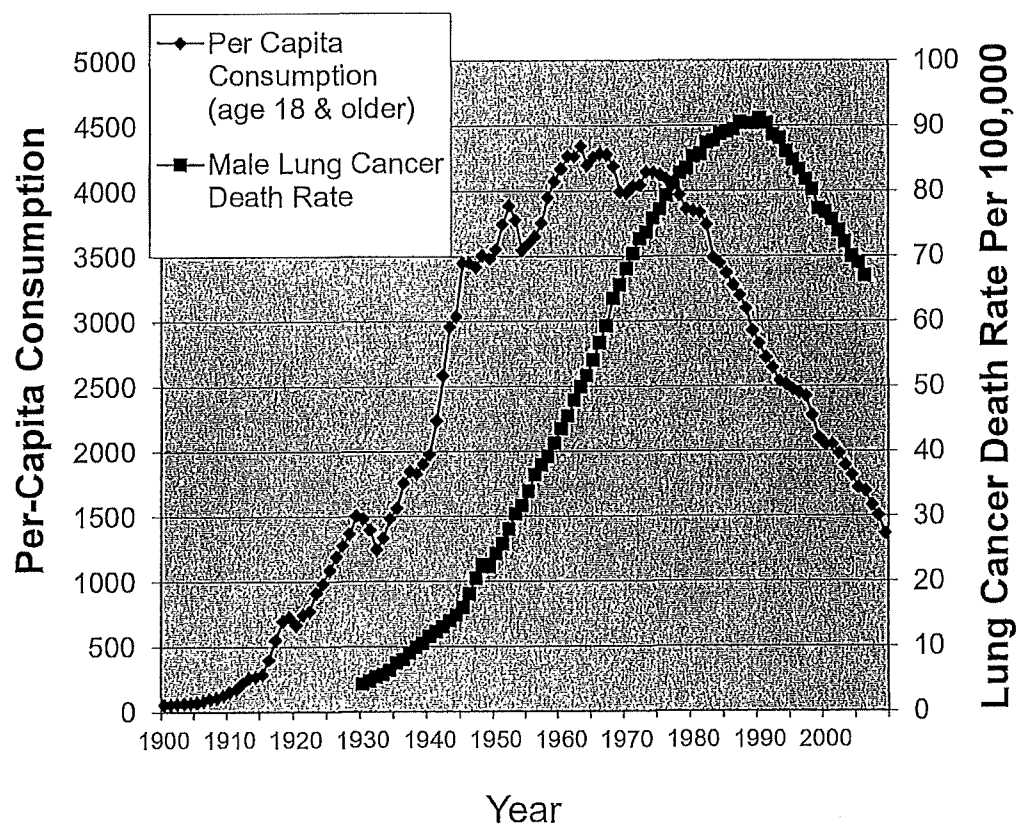



Figure 2. Comparison of Per-Capita Consumption and Male Lung Cancer Death Rates



This is Exhibit "J" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia



Imperial Tobacco Canada Limited

Light and Mild Cigarettes

Confidential

01 April 2019



Crosson Valuation

C H A R T E R E D P R O F E S S I O N A L A C C O U N T A N T

Confidential

Klein Lawyers LLP
400 – 1385 West 8th Avenue
Vancouver, BC V6H 3V9

01 April 2019

Attention: Douglas Lennox

Imperial Tobacco Canada Limited Light and Mild Cigarettes

A civil claim is proceeding in the Supreme Court of British Columbia between Kenneth Knight (the "Certified Plaintiff") and Imperial Tobacco Canada Limited ("ITCAN"). ITCAN has recently obtained creditor protection under the Companies' Creditors Arrangement Act ("CCAA").

I am a Chartered Professional Accountant and Chartered Business Valuator, experienced in accounting, business evaluation and financial analysis. I have been engaged by legal counsel for the Certified Plaintiff as an independent and objective expert to provide an opinion as to the ITCAN revenues and profits from the sale of light and mild cigarettes in British Columbia from May 9, 1997 to July 31, 2007.

Counsel has requested that I provide this preliminary estimate of those revenues and profits for the purposes of ITCAN's CCAA proceedings.

The scope of my work, the assumptions I relied on and the basis of my responses are contained in the body of my report.

Limitations

This report is confidential and is not to be disclosed or referenced without my prior written consent. It is subject to the limiting conditions outlined in Appendix E.

Yours truly,
Crosson Valuation Inc.

Richard F. Crosson CPA, CA CBV
Principal



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ITCAN net revenue per cigarette and operating margin.....	Schedule 4.0

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Information Request	Appendix C
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Defined Terms

In this report, I have adopted the following defined terms:

Report term	Definition
\$ or CAD	Canadian dollars
Certified Plaintiff	Kenneth Knight
CICBV	Canadian Institute of Chartered Business Valuators
Class Period	May 9, 1997 to July 31, 2007
Counsel	Klein Lawyers LLP
fiscal year	fiscal year of ITCAN or IMASCO ending December 31 st
Imasco	Imasco Limited, predecessor to ITCAN
ITCAN	Imperial Tobacco Canada Limited, which was formed by amalgamation of Imasco on February 1, 2000
Light and Mild cigarettes	<p>In the specific context, cigarettes sold by ITCAN under the following brand names: du Maurier Light; du Maurier Extra Light; du Maurier Ultra Light; du Maurier Special Mild; Matinee Extra Mild; Medallion Ultra Mild; Player's Light; Player's Light Smooth; and Player's Extra Light.</p> <p>In an overall market context, "Light and Mild" is used to describe manufactured cigarettes branded or described as "mild", "ultra-mild", "light", "ultra-light" or similar terms</p>
MD&A	"Management's Discussion & Analysis", a document filed quarterly by public companies in Canada and posted on SEDAR that contains financial and operational data and commentary
Profits	ITCAN's pre-tax operating profits from the sale of Light and Mild cigarettes in BC during the Class Period
Revenues	ITCAN's revenues, net of duties and taxes, from the sale of Light and Mild cigarettes in BC during the Class Period
SEDAR	The electronic system for the official filing of documents by public companies and investment funds across Canada. Documents are publicly available at https://www.sedar.com/
tobacco segment	The operating segment of Imasco that carried on tobacco operations
unit	One cigarette or cigarette equivalent
unit sales	Numbers of cigarettes or cigarette equivalents sold

1. Context

- 1.1 A civil claim under the Class Proceedings Act is proceeding against ITCAN in the Supreme Court of British Columbia. The Certified Plaintiff class is claiming damages relating to the sale by ITCAN of light and mild cigarettes ("Light and Mild" cigarettes) during the period May 9, 1997 to July 31, 2007 (the "Class Period").
- 1.2 Klein Lawyers LLP is legal counsel for the Certified Plaintiff class ("Counsel"). I have been engaged by Counsel as an independent and objective expert to prepare a report quantifying ITCAN's revenues and profits from the sale of Light and Mild cigarettes in British Columbia during the Class Period ("Revenues and Profits").
- 1.3 ITCAN has obtained an Initial Order from the Ontario Superior Court of Justice granting it protection under the CCAA. This has the effect of staying all current tobacco litigation in Canada against ITCAN.
- 1.4 Counsel has requested that I prepare a preliminary estimate of Revenues and Profits. The purpose of this report is to assist the Interim Tobacco Claimants' Coordinator appointed in the CCAA creditor protection proceedings to better understand and value the claims made by the Certified Plaintiff class.
- 1.5 Counsel's instruction letter is attached as Appendix D.

Certification of Duty

- 1.6 I am aware of my role in this matter as an expert and that my duty is to assist the Interim Tobacco Claimants' Coordinator and not assume the role of advocate for any party. I certify that this report is made in conformity with that duty.

Independence and qualifications

- 1.7 This report has been prepared in conformity with the Practice Standards of the CICBV. I confirm that I and other CV professionals assisting in this engagement prepared this report acting independently and objectively. To the best of my knowledge, we have no conflicts of interest. CV's fees were not contingent on the conclusions of this report or on an action or event resulting from its use.
- 1.8 I am a Chartered Professional Accountant and Chartered Business Valuator with over 35 years of accounting, financial advisory and business valuation experience. My Statement of Qualifications is attached as Appendix B.
- 1.9 The conclusions expressed in this report are solely mine.

Scope of work

- 1.10 The conclusions contained in this report are based on the scope of the work I performed and the assumptions I relied on. They are subject to the limitations disclosed.
- 1.11 In preparing this report, the scope of my work included:
 - a) Discussions with Counsel to gain a background understanding of the matter and to obtain instruction.

- b) Research to obtain relevant publicly available information to inform my analysis (including ITCAN's financial reports, Government of Canada data and other information).
- c) Preparation of the analyses contained in this report.

Scope limitation

- 1.12 In September 2016, I provided Counsel with a listing of documents and information to assist in the preparation of a request for documents from ITCAN. The memorandum containing that listing is attached as Appendix C.
- 1.13 The listing comprised items I anticipated would be required to calculate Revenues and Profits. Based on my review of ITCAN's financial statements posted on SEDAR, other publicly available information and my professional experience, I expected that ITCAN would have the information requested.
- 1.14 Counsel has informed me that the listed information has not been provided. As such, in preparing this report I necessarily relied on publicly available information. While I have no reason to believe the analysis and conclusions contained in this report are not reliable, they are based on a limited scope of work. As such, the estimates provided will in this report not be precise. If my analyses were based on more complete information, it is possible that the resulting Revenues and Profits would differ materially from the preliminary estimates provided in this report.

Currency

- 1.15 Unless otherwise indicated, financial amounts in this report are expressed in Canadian dollars (\$) or "CAD").

2. Summary conclusion

- 2.1 In the absence of detailed ITCAN financial and operating data, it was necessary to calculate ITCAN's Revenues and Profits during the Class Period based on information disclosed in the company's publicly available financial reports, Government of Canada cigarette sales data and survey based estimates of Light and Mild market share.
- 2.2 Health Canada data indicated that approximately 39.0 billion cigarettes (all brands) were sold in BC during the Class Period. Based on ITCAN's reported Canadian market share, ITCAN's cigarette sales in BC during the Class Period were estimated at approximately 24.8 billion cigarettes (all ITCAN brands).
- 2.3 Based on a contemporaneous Health Canada survey finding, I assumed that 61% of ITCAN's total BC cigarette sales were Light and Mild cigarettes.
- 2.4 As summarized in Table 1, ITCAN's Light and Mild sales in BC during the Class Period were estimated at approximately 15.1 billion cigarettes.

Table 1: ITCAN Revenue and Profits during Class Period (millions)

Year	ITCAN Light and Mild cigarette sales	ITCAN Revenues	ITCAN Profits
1997 - 7.8 months	1,118	\$54.8	\$25.9
1998	1,726	88.0	40.9
1999	1,715	89.2	43.6
2000	1,681	95.8	48.3
2001	1,673	103.7	52.1
2002	1,570	108.3	59.6
2003	1,356	107.1	58.5
2004	1,245	89.6	47.5
2005	1,201	81.7	42.5
2006	1,164	79.2	41.2
2007 - 7.0 months	660	44.9	23.4
Class Period	15,109	\$942	\$484

- 2.5 Revenues per cigarette sold were estimated based on ITCAN revenues (net of taxes and duties) and unit cigarette sales as reported in ITCAN's published financial statements and MD&A reports.
- 2.6 As summarized in Table 1, ITCAN's total Revenues on the sale of 15.1 billion of Light and Mild cigarettes in BC during the Class Period were estimated at \$942 million. Based on reported operating margins for all tobacco products, ITCAN's Profits on those cigarette sales were estimated at \$484 million.

Conclusion

- 2.7 Based on the limited scope of my work and the assumptions I relied on, and subject to the limitations disclosed, I estimate ITCAN earned Revenues of \$942 million and Profits of \$484 million from the sale of Light and Mild cigarettes in BC during the period from May 9, 1997 to July 31, 2007.

3. Assumptions, background and terminology

Assumptions

- 3.1 My conclusions are based on certain assumptions. Significant assumptions are disclosed in the body of this report, in the attached schedules and in the statement of limiting conditions at Appendix E.
- 3.2 Assumptions relating to matters of fact and law are based on instruction from Counsel. For key assumptions that are within the scope of my expertise, the procedures followed to determine their reasonableness and appropriateness are limited to the procedures disclosed in this report.

Instructed assumptions

- 3.3 In preparing my report, Counsel has instructed me to assume the following:
- a) The Class Period runs from May 9, 1997 to July 31, 2007.
 - b) The Defendant's Light and Mild cigarettes were sold in British Columbia during the Class Period under the following brand names:

du Maurier Light	Medallion Ultra Mild
du Maurier Extra Light	Player's Light
du Maurier Ultra Light	Player's Light Smooth
du Maurier Special Mild	Player's Extra Light.
Matinee Extra Mild	
- 3.4 I have assumed the above brands represent all the "Light and Mild" brands sold by ITCAN during the Class Period.

ITCAN and Imasco

- 3.5 Financial information for ITCAN's tobacco business was obtained from documents filed on SEDAR.
- 3.6 ITCAN's December 31, 2000 financial statement reports that Imperial Tobacco Canada Limited was formed on February 1, 2000 by the amalgamation of Imasco Limited ("Imasco") and British American Tobacco (Canada) Limited. Prior to the amalgamation, British American Tobacco (Canada) Limited had not carried on any business activity. After the amalgamation, ITCAN was a wholly owned indirect subsidiary of British American Tobacco p.l.c.
- 3.7 Prior to 2000, Imasco operated a number of non-tobacco businesses. Imasco's December 2000 financial statement reported that in a reorganization on January 28, 2000, Imasco's Financial Services segment (CT Financial), Drugstore segment (Shoppers Drug Mart) and the Land Development segment (Genstar Development Company) were disposed of and that its Foodservice segment (Fast Food Merchandisers, Inc.) had been reported as a discontinued business since 1998.
- 3.8 Imasco's financial statements and Management's Discussion & Analysis ("MD&A") contain segmented financial information and other disclosures that report "Imperial Tobacco" business results. In this report, I use the term "ITCAN" to describe both Imperial Tobacco Canada Limited and the Imperial Tobacco business operated by Imasco. Where I use the term "Imasco", it refers to the pre-amalgamation company.

- 3.9 ITCAN's last filed financial reports on SEDAR for its September 30, 2005 third quarter. No ITCAN financial or operating data was available after that date.

Terminology

- 3.10 In preparing this report, I use certain accounting and operational terminology. A summary of key terms is provided at the front of this report. The definitions of the key report specific terms I rely on are as follows:

Revenue

- 3.11 "Revenue" measures the net sales revenues that ITCAN earned from the sale of Light and Mild cigarettes. Unless otherwise indicated, it is the net revenue earned in BC during the Class Period. As ITCAN was a cigarette manufacturer, not a retailer, the amounts that consumers paid to purchase Light and Mild cigarettes would have been higher.
- 3.12 Consistent with ITCAN's financial reporting, Revenue is based on reported "net revenue", which is net of tobacco taxes and duties.

Profits

- 3.13 Profits measures the operating profits that ITCAN earned from the sale of Light and Mild cigarettes during the Class Period. Profits are operating earnings. Unless otherwise indicated, it is the Profits earned during the Class Period.
- 3.14 Consistent with ITCAN's financial reporting, operating earnings is net of tobacco taxes and duties, but before income tax, amortization of goodwill, interest, special charges and other income and expense items not allocated by IMASCO to its tobacco segment.

Cigarettes and "units"

- 3.15 I use the terms "cigarettes" and "units" to describe sales of individual cigarettes (sometimes referred to in industry data as "sticks"). In its financial reporting, ITCAN reports billions of cigarettes sold and shipments in numbers of cigarettes and cigarette equivalents¹. "Unit sales" measure the numbers of cigarettes or cigarette equivalents sold.
- 3.16 The Light and Mild unit sales calculated do not include non-cigarette tobacco products sales nor "export and duty-free" cigarette sales.

Market share

- 3.17 "Market share" describes subject unit sales as a percentage of total unit sales in a given market. In this report, the relevant market shares are ITCAN's share of Canadian domestic manufactured cigarette wholesale sales and Light and Mild cigarette sales as a percentage of manufactured cigarette sales in BC.

¹ Cigarette equivalents included in ITCAN's financial reporting include tobacco sticks and "roll-your-own" tobacco products.

4. Approach and analysis

Reliance on public information

- 4.1 Based on my experience, I expect that ITCAN's financial and operational records would specifically track and record the unit sales and net revenues for each of its brands of Light and Mild cigarettes in BC. It is likely that ITCAN separately calculated operating profits from sale of Light and Mild cigarettes.
- 4.2 As ITCAN has not provided Light and Mild cigarettes data and as its financial reporting does not disclose this information separately, it was necessary to estimate unit sales, Revenues and Profits based on publicly available information.

Approach

- 4.3 Revenues for each year of the Class Period are calculated as the product of:
- Estimated unit sales of Light and Mild cigarettes in British Columbia; and
 - ITCAN's estimated net revenue per cigarette sold.
- 4.4 Profits were estimated by applying ITCAN's estimated operating profit margin to Revenues. As profit margins varied, a separate operating profit margin was applied to each calendar period.

Unit sales

- 4.5 Unit sales of Light and Mild Cigarettes in BC during the Class Period were calculated based on three components:
- Cigarette sales in BC;
 - ITCAN percentage market share in BC; and
 - The percentage of ITCAN's BC sales that were Light and Mild cigarettes.

BC cigarette sales data

- 4.6 Health Canada reported total unit wholesale cigarette sales in BC for calendar years 1997 to 2007. The statistics did not include unit sales by manufacturer or by product category. In this report, wholesale unit sales were assumed to reasonably estimate retail unit sales to consumers.
- 4.7 As data was on a calendar year basis, unit sales in 1997 and 2007 were calculated on the assumption that sales in the Class Period were a pro-rata proportion of full year amounts:
- 64.9% for the 7.8 months of 1997 in the Class Period (May 9, 1997 to December 31, 1997)
 - 58.1% for the 7.0 months of 2007 in the Class Period (January 1, 2007 to July 31, 2007)
- 4.8 As compiled on Schedule 2.0, unit sales in BC during the Class Period were 39.0 billion cigarettes.

Market share data

- 4.9 ITCAN's MD&As reported its domestic cigarette shipments for calendar years 1997 to 2004, and for the 12 months ending September 2005, both for ITCAN and for the industry. ITCAN also reported its percentage share of the domestic manufactured cigarette market.
- 4.10 No separate ITCAN data was reported for BC. No separate ITCAN data was reported for Light and Mild cigarette sales.

- 4.11 ITCAN's shipment and market share data is compiled on Schedule 3.0. As shown on the schedule, ITCAN's share of Canadian domestic market manufactured cigarette shipments between 1997 and 2005 ranged from 55.2% to 68.8% and averaged 65.0%.
- 4.12 ITCAN made no public disclosure on SEDAR of its financial results and market share after September 2005. While no market share data was available for 2006, Statista reported ITCAN's market share to be 52.6% in 2007. This compared to ITCAN's reported trailing 12-month September 2005 market share, which was 55.2%.
- 4.13 In the absence of specific market share data, I assumed ITCAN's 2006 market share was 53.9%, which is the average of the 2005 and 2007 data.

ITCAN cigarette sales in BC

- 4.14 To calculate ITCAN's cigarette sales in BC during the Class Period, I applied the market share data described above (Schedule 3.0) to total BC cigarette sales (Schedule 2.0). My calculation assumes that ITCAN's market share in BC was the same as its Canadian market share.
- 4.15 As calculated at Schedule 2.0, I estimated ITCAN sales of manufactured cigarettes in BC during the Class Period was 24.8 billion cigarettes, which was 63.5% of total cigarette sales in BC during the Class Period.

Light and Mild market share

- 4.16 The data available indicating the proportion of cigarette sales in the Light and Mild category during the Class Period was limited.
- 4.17 The only study available that indicated Light and Mild market share in BC was a Health Canada 1998 study, which included a survey of preferred "cigarette brands". The survey indicated that respondents expressing a preference for "light or mild" comprised:
- a) 61% of BC respondents; and
 - b) 59% of total Canada respondents.
- 4.18 This compared to 35% (BC) and 38% (Canada) respondents preferring "regular" in the survey, 4% of respondents (both BC and Canada) either did not know or had "no usual type".
- 4.19 For the purposes of my analysis, I have assumed that 61% of ITCAN's cigarette sales in BC during the Class Period were Light and Mild, which corresponds to the survey percentage of respondents specifically expressing a preference.
- 4.20 As the only categories surveyed were "light or mild" and "regular", it is likely that some portion of the 4% were Light and Mild smokers. As such, 61% may slightly understate the Light and Mild market share.
- 4.21 Several publications obtained during my research referred to the 2003 Canadian Tobacco, Alcohol and Drugs Survey ("CTADS"), which was published by Statistics Canada. While that survey has been archived and is not directly available to the public, Statistics Canada allowed me access to the data.

- 4.22 Annual data contained in the 2003 CTADS survey indicated that 58% of all respondents indicated they usually smoked Light and Mild cigarettes². That statistic is generally consistent with the 1998 Health Canada survey finding for Canada (59%).

ITCAN Light and Mild cigarette sales in BC

- 4.23 Assuming ITCAN's Light and Mild cigarette sales in BC were 61% of ITCAN's total BC sales, at Schedule 2.0, I estimated ITCAN sales of Light and Mild cigarettes in BC during the Class Period were 15.1 billion cigarettes.

Unit Revenues and Profits

- 4.24 Revenues and Profits are calculated as the product of:
- ITCAN's Light and Mild cigarette sales (as calculated above); and
 - ITCAN's Revenues and Profits on a unit basis.

Net revenue and operating profits

- 4.25 ITCAN's financial statements and MD&As disclosed segmented operating results for its tobacco segment for 1997 to 2005. The two relevant components were:
- "Net revenue", which is ITCAN's total tobacco revenue from wholesale shipments net of tobacco taxes and duties; and
 - "Operating profit", which is ITCAN's total tobacco operating earnings (again net of tobacco taxes and duties) and before income tax, amortization of goodwill, interest, special charges and other income and expense items not allocated to the tobacco segment.

Unit Revenue

- 4.26 Schedule 4.0 compiles ITCAN's estimated net revenue for fiscal periods 1997 to 2005. In relation to that data:
- As fiscal 2000 net revenues were only for 11 months, revenue for the full calendar year was based on pro-rated 11 month results; and
 - As fiscal 2005 net revenues were only for 9 months, revenue for the full calendar year was based on pro-rated 9 month results.
- 4.27 ITCAN's reported tobacco segment net revenues were for all tobacco products, which included domestic roll-your-own, domestic tobacco sticks, export and duty-free cigarettes, export and duty-free roll-your-own, and export and duty-free tobacco sticks.
- 4.28 ITCAN also reported tobacco segment unit sales for all product categories (with non-cigarette units reported on a "cigarette equivalent" basis. Approximately 92% of ITCAN's tobacco segment unit sales were domestic sales of manufactured cigarettes.
- 4.29 Schedule 4.0 also compiles ITCAN's estimated unit shipments for fiscal periods 1997 to 2005. In relation to that data, unit shipments for the 12 months ended September 2005, were assumed to be indicative of unit shipments in calendar 2005.

² Based on a comparison of responses to the question "What strength of cigarettes do you usually smoke?", where 58% of responses providing an indication fell in the categories "Ultra or extra light", "Lights", "Ultra or extra mild" and "Mild"

- 4.30 Dividing total tobacco segment net revenues in each year by total cigarette equivalent unit shipments, Schedule 4.0 calculates Revenue per unit for 1997 to 2005. This calculation implicitly assumes that net revenue per Light and Mild cigarette sold in the period equalled net revenue per cigarette equivalent sold. As shown on the schedule, calculated Revenue per unit ranged from \$0.049 to \$0.079 per cigarette and averaged \$0.062 per cigarette.
- 4.31 In the absence of ITCAN financial reporting in 2006 and 2007, Revenue per unit in those years was assumed to be \$0.068 per cigarette, which was the per unit estimate for 2005.

Operating margin

- 4.32 "Operating margin" measures operating profit as a percentage net revenue.
- 4.33 Schedule 4.0 calculates ITCAN's tobacco segment operating margins for 1997 to 2005. This calculation implicitly assumes that operating margin on Light and Mild cigarettes equalled the operating margin on all tobacco sector products³. As shown on the schedule, from 1997 to 2005, operating margin ranged from 46.5% to 55.0% and averaged 50.9%.
- 4.34 In the absence of operating results for 2006 and 2007, operating margins in those years were assumed to be 52.1%, the operating margin in 2005.

Revenues in the Class Period

- 4.35 Revenues in each calendar year of Class Period were calculated as the product of:
- a) ITCAN Light and Mild cigarette sales in BC during the year; times
 - b) Revenue per unit in the year.
- 4.36 As calculated at Schedule 1.0, I estimate total ITCAN Revenue from sales of Light and Mild cigarettes in BC during the Class Period were \$942 million.

Profits in the Class Period

- 4.37 Profits in each calendar year of Class Period were calculated as the product of:
- a) ITCAN Revenues in the year; times
 - b) ITCAN's operating margin in the year.
- 4.38 As calculated at Schedule 1.0, I estimate total ITCAN Profits from sales of Light and Mild cigarettes in BC during the Class Period were \$484 million.

³ ITCAN's 2001 MD&A (page 9) indicates that profits are highest in the cigarette segment and that 88% of industry sales are manufactured cigarettes. As such, while the assumption that the operating margin on cigarettes is the same as the operating margin on all tobacco products may understate Profits, I have assumed the understatement is not be material.

Schedules

ITCAN Revenues and Profits in Class Period.....	Schedule 1.0
ITCAN Light and Mild cigarette sales in BC.....	Schedule 2.0
ITCAN domestic market share in Canada	Schedule 3.0
ITCAN net revenue per cigarette and operating margin.....	Schedule 4.0

Imperial Tobacco Canada Limited
Revenues and Profits in Class Period
Millions

Schedule 1.0

01-Apr-2019

Year	IITCAN Light and Mild (cigarettes) Sch 2.0	Per Unit Revenue (\$ per cigarettes) Sch 4.0	Revenues	Operating Margin Sch 4.0	Profits
1997 - 7.8 months	1,118 x	\$ 0.049 =	\$ 54.8 x	47.2% =	\$ 25.9
1998	1,726 x	0.051 =	88.0 x	46.5% =	40.9
1999	1,715 x	0.052 =	89.2 x	48.9% =	43.6
2000	1,681 x	0.057 =	95.8 x	50.4% =	48.3
2001	1,673 x	0.062 =	103.7 x	50.2% =	52.1
2002	1,570 x	0.069 =	108.3 x	55.0% =	59.6
2003	1,356 x	0.079 =	107.1 x	54.6% =	58.5
2004	1,245 x	0.072 =	89.6 x	53.0% =	47.5
2005	1,201 x	0.068 =	81.7 x	52.1% =	42.5
2006	1,164 x	0.068 =	79.2 x	52.1%	41.2
2007 - 7.0 months	660 x	0.068 =	44.9 x	52.1%	23.4
Total in Class Period	15,109	\$ 0.062	\$ 942		\$ 484

Imperial Tobacco Canada Limited
ITCAN Light and Mild cigarette sales in BC
Millions of cigarettes

Schedule 2.0

01-Apr-2019

Year	Total Sales In BC (cigarettes)	Portion of year Note 2	Sales In Class Period (cigarettes)	ITCAN % Share Sch 3.0	ITCAN Sales In Period (cigarettes)	Light and Mild % Note 2	ITCAN Light and Mild (cigarettes)
	Note 1						
1997 - 7.8 months	4,152 x	64.9% =	2,695 x	68.0% =	1,833 x	61% =	1,118
1998	4,136 x	100% =	4,136 x	68.4% =	2,829 x	61% =	1,726
1999	4,086 x	100% =	4,086 x	68.8% =	2,811 x	61% =	1,715
2000	4,011 x	100% =	4,011 x	68.7% =	2,756 x	61% =	1,681
2001	4,057 x	100% =	4,057 x	67.6% =	2,743 x	61% =	1,673
2002	3,795 x	100% =	3,795 x	67.8% =	2,573 x	61% =	1,570
2003	3,523 x	100% =	3,523 x	63.1% =	2,223 x	61% =	1,356
2004	3,563 x	100% =	3,563 x	57.3% =	2,041 x	61% =	1,245
2005	3,568 x	100% =	3,568 x	55.2% =	1,969 x	61% =	1,201
2006	3,539 x	100% =	3,539 x	53.9% =	1,907 x	61% =	1,164
2007 - 7.0 months	3,538 x	58.1% =	2,056 x	52.6% =	1,081 x	61% =	660
Total in Class Period			39,029	63.5%	24,767		15,109

Notes

1. Source: Health Canada, Cigarette Sales in BC
2. 1997 is for May 9th to December 31st. 2007 is for January 1st to July 31st.
3. Source: 1998 Environics Research Group Survey of "Light" or "Mild" in B.C. sub-region., contained in "Smokers' Attitudes toward 'Light' and 'Mild' Cigarettes", prepared for Health Canada Office of Tobacco Control.

Imperial Tobacco Canada Limited
ITCAN domestic market share in Canada
Millions of cigarettes

Schedule 3.0
01-Apr-2019

Year	ITCAN and Industry Shipment Data			ITCAN Market Share Note 2
	ITCAN	Industry	ITCAN as %	
	(cigarettes) Note 1	(cigarettes) Note 1		
1997	31,200 ÷	45,500 =	68.6%	68.0%
1998	31,500 ÷	45,500 =	69.2%	68.4%
1999	31,300 ÷	45,300 =	69.1%	68.8%
2000	30,200 ÷	43,600 =	69.3%	68.7%
2001	29,100 ÷	42,300 =	68.8%	67.6%
2002	25,900 ÷	38,200 =	67.8%	67.8%
2003	22,900 ÷	36,200 =	63.3%	63.1%
2004	19,900 ÷	34,700 =	57.3%	57.3%
2005	18,500 ÷	33,400 =	55.4%	55.2%
2006				53.9%
2007				52.6%
			<u>1997 to 2005</u>	
			High	68.8%
			Low	55.2%
			Average	65.0%

Notes

1. Source: ITCAN MD&A, except for 2005, which is based on 12 months to September 2005. Domestic manufactured cigarette sales only.
2. Source: ITCAN MD&A, except for 2006 and 2007. Note that the market shares are slightly different than those calculated. 2007 is based on Statista data. 2006 is average of 2005 and 2007.

Imperial Tobacco Canada Limited
 ITCAN net revenue per cigarette and operating margin
 Millions

Schedule 4.0
 01-Apr-2019

Year	Net Revenue Note 1	Cigarette Equivalents (cigarettes) Note 1	Per Unit Revenue (\$ per cigarettes) Note 2	Operating Profit Note 3	Net Revenue Note 3	Operating Margin Note 4
1997	\$ 1,642 ÷	33,700 =	\$ 0.049	\$ 775 ÷	\$ 1,642 =	47.2%
1998	\$ 1,754 ÷	34,200 =	\$ 0.051	\$ 815 ÷	\$ 1,754 =	46.5%
1999	\$ 1,781 ÷	34,100 =	\$ 0.052	\$ 871 ÷	\$ 1,781 =	48.9%
2000	\$ 1,857 ÷	32,800 =	\$ 0.057	\$ 936 ÷	\$ 1,857 =	50.4%
2001	\$ 1,926 ÷	31,300 =	\$ 0.062	\$ 967 ÷	\$ 1,926 =	50.2%
2002	\$ 1,915 ÷	27,800 =	\$ 0.069	\$ 1,054 ÷	\$ 1,915 =	55.0%
2003	\$ 1,951 ÷	24,800 =	\$ 0.079	\$ 1,066 ÷	\$ 1,951 =	54.6%
2004	\$ 1,545 ÷	21,600 =	\$ 0.072	\$ 819 ÷	\$ 1,545 =	53.0%
2005	\$ 1,360 ÷	19,900 =	\$ 0.068	\$ 708 ÷	\$ 1,360 =	52.1%
2006			\$ 0.068			52.1%
2007			\$ 0.068			52.1%
		<u>1997 to 2005</u>				<u>1997 to 2005</u>
		High	\$ 0.079			High 55.0%
		Low	\$ 0.049			Low 46.5%
		Average	\$ 0.062			Average 50.9%
		<u>2003 to 2005</u>				<u>2003 to 2005</u>
		Average	\$ 0.073			Average 53.2%

Notes

1. Source: ITCAN 1997 to 2005 financial statement or MD&A
2. Per unit revenues for 2006 and 2007 are assumed to be the same as 2005.
3. Source: ITCAN financial statements or MD&A. 2000 is 11 months to November 2000, prorated to 12 months. 2005 is 9 months to September 2005, pro-rated to 12 months. "Net Revenue" is after deduction of tobacco taxes and duties.
4. Operating margins in 2006 and 2007 are assumed to be the same as 2005

Appendices

Documents relied on	Appendix A
Statement of qualifications – Richard F. Crosson	Appendix B
Information Request	Appendix C
Counsel's instruction letter	Appendix D
Statement of limiting conditions	Appendix E

Appendix A

Documents relied on

In preparing this report, I reviewed and relied on certain information contained in the following documents and information:

Publicly available information obtained from SEDAR:

1. Imasco Limited financial statements for years ending December 31, 1997 to 1999
2. Imasco Limited Management's Discussion and Analysis for years ending December 31, 1997 to 1999
3. Imperial Tobacco Canada Limited financial statements for 11 months ended November 30, 2000, years ending December 31, 2001 to 2004, and 9 months ended September 30, 2005
4. Imperial Tobacco Canada Limited Management's Discussion and Analysis for 11 months ended November 30, 2000, years ending December 31, 2001 to 2004, and 9 months ended September 30, 2005

Other publicly available information:

5. Health Canada wholesale sales data for cigarette sales in Canada and BC for 1997 to 2007, available at <http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/wholesale-sales-2013-cigarettes-provinces-ventes-en-gros/index-eng.php#a3>
6. Data as to ITCAN's 2007 market share from Statista, "The Statistics Portal", available at <https://www.statista.com/statistics/452359/leading-tobacco-companies-by-market-share-canada/>
7. "Smokers' Attitudes Towards 'Light'" and 'Mild' Cigarettes", prepared for Health Canada Office for Tobacco Control, in file "1990202_smokers_attitudes_towards_light_and_mild_cigarettes.pdf.", obtained from https://www.poltext.org/sites/poltext.org/files/1990202_smokers_attitudes_towards_light_and_mild_cigarettes.pdf
8. "Fact Sheet, Physicians for a Smoke-Free Canada, obtained from <http://www.smoke-free.ca/factsheets/pdf/lightcigarettesmokers.pdf>, which references 2003 CTADS

Obtained directly from Statistics Canada:

9. 2003 Canadian Tobacco, Alcohol and Drugs Survey data, contained in Public Use Microdata File (PUMF) for CTUMS 2003 in file named "CTUMS2003_Annual_PR_CdBk.pdf"

Richard F Crosson CPA, CA CBV

Education

- Bachelor of Commerce degree from the University of British Columbia, 1979, major in Accounting and Management Information Systems.
- Chartered Professional Accountant, 1981, recognized on the Canadian Institute of Chartered Accountants Honours List (scoring in the top one-half percentile on the CICA's national Uniform Final Examination). Member of Chartered Professional Accountants of Canada and the Chartered Professional Accountants of British Columbia.
- Chartered Business Valuator, 1989 (scoring the highest mark in Canada on the Institute's qualifying examination). Member of the Canadian Institute of Chartered Business Valuators.

Responsibilities

- Richard Crosson is the principal of Crosson Valuation Inc. CV provides business valuation, litigation support and advisory services to business, government and other professional firms.
- Prior to founding CV, Mr. Crosson was a senior partner at Ernst & Young LLP. His duties included leading EY Canada's valuation practice and EY United States' West Area transaction advisory business.
- He was a principle of CrossonVoyer, Chartered Accountants and BlairCrossonVoyer, Chartered Accountants from 1989 to 2003.
- Mr. Crosson's earlier work history includes employment at Thorne Riddell, Chartered Accountants (1979 to 1983), Bank of Montreal (1983 to 1986) and Deloitte Haskins & Sells (1986 to 1989).

Areas of specialization

- Business valuation
- Quantification of values and financial losses in litigious matters
- Financial advisory services

Overall experience

- Over thirty-five years of public practice and management accounting and consulting experience, with a focus on financial advisory practice, particularly litigation support and business valuation.
- Litigation support engagements, including shareholder disputes, business interruption losses, business valuations, breach of contract claims, and expropriation compensation claims. Richard has been recognized as one of Canada's leading litigation experts. He has appeared as an expert witness on over 50 occasions, in BC Supreme Court, in arbitrations, before the BC Expropriation Compensation Board and Canada Transportation Board.

- Valuation engagements have included property development, construction, real estate, mining, financial services, insurance, manufacturing, service, wholesaling, distribution, technology, venture capital, and a wide variety of other commercial businesses, investment companies, and professional practices.
- Financial advisory services, including transaction advisory consulting, business plans and viability studies, financial modelling, tax policy analysis and economic impact assessment. Preparation of fairness opinions and assessments in the context of going private transactions, share exchanges and purchases, non-arm's length transactions and directors' actions.

Appendix C

Information request

Confidential

Crosson Valuation LLP

Memorandum

To: Doug Lennox
From: Richard Crosson, Crosson Valuation
Re: Knight v ITCAN
Information Request
Date: September 22, 2016

Purpose of memo

You have asked me to consider and provide a listing of documents and sources of information you might request from Imperial Tobacco Canada Ltd ("ITCAN") in relation to the following.

1. How much revenue and profit did ITCAN generate in British Columbia and Canada from its sales of Players Light and Du Maurier Light cigarette brands (the "Subject Brands")?
2. How much revenue and profit did ITCAN generate in British Columbia and Canada from its sales of light and mild products as a category?
3. What were the British Columbia and Canada market shares, by market revenue and quantity sold, of the Subject Brands and in relation to:
 - a. All ITCAN cigarette products?
 - b. All ITCAN light and mild cigarette products?
 - c. All manufacturers mild and light cigarette products?
 - d. All manufacturers cigarette products?
4. What were the British Columbia and Canada market shares, by market revenue and quantity sold, of all of ITCAN's mild and light products in relation to:
 - a. All ITCAN cigarette products?
 - b. All manufacturers mild and light cigarette products?
 - c. All manufacturers cigarette products?

Information is required on an annual basis for the years 1997 to 2007.

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Definition of terms and clarifications

For the purposes of this information request, the following defined terms are used.

fiscal	fiscal year ending December 31 st .
ITCAN	Imperial Tobacco Canada Limited
Imasco	Imasco Limited
Light and Mild cigarettes	Cigarettes sold by the Tobacco Segment or by others Canada that were described in labelling using terms such as "light" or "mild". Tobacco Segment Light and Mild cigarettes would include but not be limited to the du Maurier Light and Players Light brands. Similar terminology is used at page 4 of ITCAN's "Management's Discussion and Analysis" for the period ended December 31, 2001.
Product category	Product categories used the Tobacco Segment (domestic cigarettes, domestic roll-your-own, domestic tobacco sticks, export and duty free cigarettes, export and duty free roll-your-own, and export and duty free tobacco sticks).
Reports	Accounting records; financial reports; budgets; budget variance analyses; financial analyses and memoranda; business plans and similar documents which were prepared by or for, or are in the possession of ITCAN or its predecessor companies or its affiliates, which relate to the information requested.
Tobacco Segment	The operating segments of Imasco and ITCAN that carried on tobacco operations. For greater certainty, the Tobacco Segment is generally the same as the "Tobacco" segment reported at Note 2 to the financial statements of Imasco for the fiscal year ending December 31, 1998.
unit	One cigarette or cigarette equivalent
unit sales	Numbers of cigarettes or cigarette equivalents sold

Information requested for a period, for example 1997 to 2007, the information is requested for each fiscal year in the period.

Revenue from tobacco product sales should include both gross revenue and revenue net of duties and taxes.

If 12 month statements or data are not available for the 12 months ending December 31, 2000, provide statements or data for the month ending January 31, 2000 and for the eleven months ending December 31, 2000.

Information Listing


The following documents and information is required.

1. Consolidated financial statements of ITCAN for fiscal 2005, 2006 and 2007.
2. Organization charts, showing the subsidiaries and operating divisions of Imasco at December 31, 1996 to 1999.

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3. Organization charts, showing the subsidiaries and operating divisions of ITCAN at January 31, 2000 and at December 31, 2000 to 2007.
4. Financial statements of the Tobacco Segment for fiscal 1997 to 2007.
5. Internally prepared income statements of the Tobacco Segment for fiscal years 1997 to 2007, showing revenues and expenses at the lowest level of aggregation at operating results were presented to management.
6. Reports disclosing Tobacco Segment annual revenues from sales in fiscal 1997 to 2007 of:
 - a. Tobacco products, by product category in Canada and for export.
 - b. Cigarettes in Canada.
 - c. cigarettes in British Columbia.
 - d. Light and Mild cigarettes in Canada
 - e. Light and Mild cigarettes in British Columbia.
 - f. du Maurier Light cigarettes in Canada.
 - g. du Maurier Light cigarettes in British Columbia.
 - h. Players Light cigarettes in Canada.
 - i. Players Light cigarettes in British Columbia.
7. Reports disclosing annual Tobacco Segment unit sales in 1997 to 2007 of:
 - a. Tobacco products, by product category in Canada and for export.
 - b. Cigarettes in Canada.
 - c. Cigarettes in British Columbia.
 - d. Light and Mild cigarettes in Canada.
 - e. Light and Mild cigarettes in British Columbia.
 - f. du Maurier Light cigarettes in Canada.
 - g. du Maurier Light cigarettes in British Columbia.
 - h. Players Light cigarettes in Canada.
 - i. Players Light cigarettes in British Columbia.
8. Reports disclosing amounts and calculations of annual operating profits, contribution margins, operating profits per unit and contribution margins per unit earned by the Tobacco Segment in 1997 to 2007 from the sale:
 - a. Tobacco products, by product category in Canada and for export.
 - b. cigarettes in Canada.
 - c. cigarettes in British Columbia.
 - d. Light and Mild cigarettes in Canada.
 - e. Light and Mild cigarettes in British Columbia.
 - f. du Maurier Light cigarettes in Canada.

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- 
- g. du Maurier Light cigarettes in British Columbia.
 - h. Players Light cigarettes in Canada.
 - i. Players Light cigarettes in British Columbia.
 9. Reports disclosing the calculation of the "estimated \$10 million in foregone earnings" disclosed in the "Market Share" section at page 4 of ITCAN's "Management's Discussion and Analysis For the period ended December 31, 2001" (document filed on SEDAR).
 10. Reports disclosing the calculation of the Federal surtax on tobacco products relating to the Tobacco Segment for fiscal 1997 to 2007. Include Reports showing surtax calculations relating to domestic tobacco products for Canada and by province and territory.
 11. Reports disclosing the financial reporting policies adopted by Imasco and ITCAN in relation to the Federal surtax on tobacco products relating to the Tobacco Segment for fiscal 1997 to 2007.
 12. Reports containing fixed and variable costs analyses, addressing the profitability of Tobacco Segment products, prepared during 1996 to 2008.
 13. Reports calculating the profitability and relative profitability of Tobacco Segment products in fiscal 1997 to 2007.
 14. Reports disclosing management's discussion and analysis of the annual operating results of the Tobacco Segment in 1997 to 2007. Reports should include, but not be limited to, all Reports provided to Imasco and ITCAN's boards of directors and to British American Tobacco.
 15. Reports provided to the Government of Canada, Statistics Canada and Health Canada disclosing revenues and/or unit sales for all and any Tobacco Segment products in 1997 to 2007.
 16. Reports to the Canadian Tobacco Manufacturers Council disclosing revenues and/or unit sales for all and any Tobacco Segment products in 1997 to 2007.
 17. Reports disclosing ITCAN's Canadian and British Columbia market shares in fiscal 1997 to 2007, in total, by brand, by market segment (regular, mild, extra-mild, etc), and at the lowest level of product aggregation for which data was prepared.
 18. Reports from the Canadian Tobacco Manufacturers Council disclosing Canadian tobacco industry revenues and/or unit sales for all and any tobacco products in 1997 to 2007.
 19. Reports disclosing annual total tobacco industry wholesale sales revenues and unit sales in 1997 to 2007 of:
 - a. Tobacco products, by product category (domestic cigarettes, domestic roll-your-own, domestic tobacco sticks, export and duty free cigarettes, export and duty free roll-your-own, and export and duty free tobacco sticks), in Canada and for export.
 - b. Tobacco products, by product category, in British Columbia.
 - c. Light and Mild cigarettes in Canada.
 - d. Light and Mild cigarettes in British Columbia.

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Limitations

This memo and any attachments are for the confidential information of Klein Lawyers LLP ("Counsel"). It is subject to the confidentiality and other limitations contained in the Business Terms of our engagement agreement with Counsel.

Only parties that are subject to the Business Terms disclosed in our engagement letter with Counsel are entitled to rely on this memo. Any reliance is subject to the terms of that agreement. We accept no responsibility to third parties in respect of this or any other advice or work product.

Draft for Discussion Only

Appendix D

Counsel's instruction letter

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March 20, 2019

Richard Crosson
Crosson Valuation LLP
Suite 850, 1095 West Pender
Vancouver, BC
V6E 2M6

Dear Mr. Crosson,

Re: *Knight v. Imperial Tobacco Canada Ltd.*

We require your professional, objective advice as an experienced business valuator in the above noted proceeding. In particular, we request that you prepare an expert report as set out below:

A. Questions

1. Please describe your professional qualifications.
2. How much revenue and profit did Imperial Tobacco Canada Ltd. ("ITCL") generate in British Columbia from its sale of light and mild cigarettes as a category during the Class Period?

B. Purpose of the Report

The purpose of the report is to assist the Interim Tobacco Claimants' Coordinator appointed by the Ontario Court in the CCAA creditor protection proceedings involving ITCL to better understand and value the claims made by the certified plaintiff class in *Knight v. Imperial Tobacco Canada Ltd.* (the "*Knight Action*").

C. Limited Scope of the Report

The above questions should be addressed by reference to publicly available information. While internal company documents and information that would have assisted in preparing this report had been requested from ITCL through discovery in the *Knight Action* such documents and information had not been obtained from ITCL prior to its CCAA filing.

D. Assumptions of Fact

The Class Period runs from May 9, 1997 to July 31, 2007.


The Defendant's Light and Mild cigarettes were sold in British Columbia during the Class Period under the following brand names:

- (a) du Maurier Light;
- (b) du Maurier Extra Light;
- (c) du Maurier Ultra Light;
- (d) du Maurier Special Mild;
- (e) Matinee Extra Mild;
- (f) Medallion Ultra Mild;
- (g) Player's Light;
- (h) Player's Light Smooth; and
- (i) Player's Extra Light.

E. Timing

It would be appreciated if you could deliver your report by April 1, 2019. Please do not hesitate to contact me if you require any information or refinement to these instructions.

Best Regards,



Douglas Lennox

Appendix E

Statement of limiting conditions

1. This report is confidential and may be privileged. Crosson Valuation Inc. has prepared this report solely for the use of Counsel and solely for the purpose stated. It should not be disclosed, quoted, used or relied on for any other purpose. CV and its principal, partners, subcontractors and other staff shall have no liability and no responsibility whatsoever to any third party that is provided or otherwise obtains a copy or extract of this report, with or without CV's knowledge or consent. Any use a third party may choose to make of this report is entirely at its own risk.
2. This report has been prepared in response to questions posed by Counsel in the context of litigation. It conforms with CICBV Practice Standard No. 310.
3. We obtained information related to the structure, operation and financial performance of ITCAN and other sources. We have not independently verified the accuracy or completeness of that information. The scope of our work did not include corroboration of the information relied on.
4. Compilations and estimates of revenues and operating profits included herein are solely for use in the report analysis. We have not performed an examination or compilation of the accompanying data in accordance with standards prescribed by CPA Canada, and, accordingly, do not express an opinion or offer any form of assurance on the accompanying data or their underlying assumptions.
5. Unless arrangements acceptable to CV have been separately agreed, in writing, with its client, none of CV, its principal and CV's other staff are obligated to perform additional work or services, give testimony, attend in court or other proceedings or update this report.
6. CV reserves the right to revise this report after consideration of any relevant information that comes to our attention after the issuance date. The date on which pertinent information was last obtained and analyzed was the report date.




Crosson Valuation Inc.

CHARTERED PROFESSIONAL ACCOUNTANT

Crosson Valuation Inc. is incorporated under the laws of British Columbia, Canada.

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www.crossoncbv.com

This is Exhibit "K" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia

Excerpts of Decision: pages 1-34 and 430-561

449 F.Supp.2d 1

UNITED STATES of America, Plaintiff, and

Tobacco-Free Kids Action Fund, American Cancer Society, American Heart Association, American Lung Association, Americans for Nonsmokers' Rights, and National African American Tobacco Prevention Network, Intervenor,

v.

PHILIP MORRIS USA, INC., (f/k/a Philip Morris, Inc.), et al., Defendants.

No. CIV.A. 99-2496(GK).

United States District Court, District of Columbia.

August 17, 2006. U.S. v. Philip Morris USA, Inc., 449 F.Supp.2d 1 (D. D.C., 2006)

Sharon Y. Eubanks, Director, Tobacco Litigation Team, Stephen D. Brody, Deputy Director, Tobacco Litigation Team, Renée Brooker, Assistant Director, Tobacco Litigation Team, Bruce G. Ohr, Chief, Organized Crime and Racketeering Section, Criminal Division, Carolyn Clark, Michelle Gluck, Russell B. Kinner, Senior Trial Counsel, Tobacco Litigation Team, Meredith L. Burrell, Allison Cendali, Daniel K. Crane-Hirsch, Elizabeth C. Crocker, James D. Gette, Andrew N. Goldfarb, Michele S. Greif, Carolyn I. Hahn, Shannon T. Kelley, Patrick M. Klein, David S. Klontz, Noelle M. Kurtin, Jason Laeser, Siobhan Madison, Brian J. McCabe, Linda M. McMahon, Mary Jo Moltzen, Stasia M. Mosesso, James T. Nelson, Joel D. Schwartz, Gregg M. Schwind, Don G. Scroggin, Kenneth E. Sealls, Andrew A. Steinberg, Ina Strichartz, Armelle Van Dorp, Robert P. Williams, Trial Attorneys, Tobacco Litigation Team, United States Department of Justice, Washington, DC, for United States of America.

FINAL OPINION

KESSLER, District Judge.

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I. INTRODUCTION

A. Overview

On September 22, 1999, the United States brought this massive lawsuit against nine cigarette manufacturers of cigarettes and two tobacco-related trade organizations. The Government alleged that Defendants have violated, and continue to violate, the Racketeer Influenced and Corrupt Organizations Act ("RICO"), 18 U.S.C. §§ 1961-1968, by engaging in a lengthy, unlawful conspiracy to deceive the American public about the health effects of smoking and environmental tobacco smoke, the addictiveness of nicotine, the health benefits from low tar, "light" cigarettes, and their manipulation of the design

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and composition of cigarettes in order to sustain nicotine addiction. As Justice O'Connor noted in *Food and Drug Administration, et al. v. Brown & Williamson Tobacco Corporation, et al.*, 529 U.S. 120, 125, 120 S.Ct. 1291, 146 L.Ed.2d 121 (2000), "[t]his case involves one of the most troubling public health problems facing our Nation today: the thousands of premature deaths that occur each year because of tobacco use."

In particular, the Government has argued that, for approximately fifty years, the Defendants have falsely and fraudulently denied: (1) that smoking causes lung cancer and emphysema (also known as chronic obstructive pulmonary disease ("COPD")), as well as many other types of cancer; (2) that

environmental tobacco smoke causes lung cancer and endangers the respiratory and auditory systems of children; (3) that nicotine is a highly addictive drug which they manipulated in order to sustain addiction; (4) that they marketed and promoted low tar/light cigarettes as less harmful when in fact they were not; (5) that they intentionally marketed to young people under the age of twenty-one and denied doing so; and (6) that they concealed evidence, destroyed documents, and abused the attorney-client privilege to prevent the public from knowing about the dangers of smoking and to protect the industry from adverse litigation results.

The following voluminous Findings of Fact demonstrate that there is overwhelming evidence to support most of the Government's allegations. As the Conclusions of Law explain in great detail, the Government has established that Defendants (1) have conspired together to violate the substantive provisions of RICO, pursuant to 18 U.S.C. § 1962(d), and (2) have in fact violated those provisions of the statute, pursuant to 18 U.S.C. § 1962(c). Accordingly, the Court is entering a Final Judgment and Remedial Order which seeks to prevent and restrain any such violations of RICO in the future.

In particular, the Court is enjoining Defendants from further use of deceptive brand descriptors which implicitly or explicitly convey to the smoker and potential smoker that they are less hazardous to health than full flavor cigarettes, including the popular descriptors "low tar," "light," "ultra light," "mild," and "natural." The Court is also ordering Defendants to issue corrective statements in major newspapers, on the three leading television networks, on cigarette "onserts," and in retail displays, regarding (1) the adverse health effects of smoking; (2) the addictiveness of smoking and nicotine; (3) the lack of any significant health benefit from smoking "low tar," "light," "ultra light," "mild," and "natural" cigarettes; (4) Defendants' manipulation of cigarette design and composition to ensure optimum nicotine delivery; and (5) the adverse health effects of exposure to secondhand smoke.

Finally, the Court is ordering Defendants to disclose their disaggregated marketing data to the Government in the same form and on the same schedule which they now follow in disclosing this material to the Federal Trade Commission. All such data shall be deemed "confidential" and "highly sensitive trade secret information" subject to the protective Orders which have long been in place in this litigation.

Unfortunately, a number of significant remedies proposed by the Government could not be considered by the Court because of a ruling by the Court of Appeals in *United States v. Philip Morris USA, Inc., et al.*, 396 F.3d 1190 (D.C.Cir.2005). In that opinion, the Court held that, because the RICO statute allows only forward-looking remedies to prevent and restrain violations of the Act, and does not

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allow backward-looking remedies, disgorgement (i.e., forfeiture of ill-gotten gains from past conduct) is not a permissible remedy.

Applying this same legal standard, as it is bound to do, this Court was also precluded from considering other remedies proposed by the Government, such as a comprehensive smoker cessation program to help those addicted to nicotine fight their habit, a counter marketing program run by an independent entity to combat Defendants' seductive appeals to the youth market; and a schedule of monetary penalties for failing to meet pre-set goals for reducing the incidence of youth smoking.

The seven-year history of this extraordinarily complex case involved the exchange of millions of documents, the entry of more than 1,000 Orders, and a trial which lasted approximately nine months with 84 witnesses testifying in open court. Those statistics, and the mountains of paper and millions of dollars of billable lawyer hours they reflect, should not, however, obscure what this case is really about. It is about an industry, and in particular these Defendants, that survives, and profits, from selling a highly addictive product which causes diseases that lead to a staggering number of deaths per year, an immeasurable amount of human suffering and economic loss, and a profound burden on our national health care system. Defendants have known many of these facts for at least 50 years or more. Despite that knowledge, they have consistently, repeatedly, and with enormous skill and sophistication, denied these facts to the public, to the Government, and to the public health community. Moreover, in order to sustain the economic viability of their companies, Defendants have denied that they marketed and advertised their products to children under the age of eighteen and to young people between the ages of eighteen and twenty-one in order to ensure an adequate supply of "replacement smokers," as older ones fall by the wayside through death, illness, or cessation of smoking. In short, Defendants have marketed and sold their lethal product with zeal, with deception, with a single-minded focus on their financial success, and without regard for the human tragedy or social costs that success exacted.

Finally, a word must be said about the role of lawyers in this fifty-year history of deceiving smokers, potential smokers, and the American public about the hazards of smoking and second hand smoke, and the addictiveness of nicotine. At every stage, lawyers played an absolutely central role in the creation and perpetuation of the Enterprise and the implementation of its fraudulent schemes. They devised and coordinated both national and international strategy; they directed scientists as to what research they should and should not undertake; they vetted scientific research papers and reports as well as public relations materials to ensure that the interests of the Enterprise would be protected; they identified "friendly" scientific witnesses, subsidized them with grants from the Center for Tobacco Research and the Center for Indoor Air Research, paid them enormous fees, and often hid the relationship between those witnesses and the industry; and they devised and carried out document destruction policies and took shelter behind baseless assertions of the attorney client privilege.¹

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What a sad and disquieting chapter in the history of an honorable and often courageous profession.

B. Preliminary Guidance for the Reader

Courts must decide every case that walks in the courthouse door, even when it presents the kind of jurisprudential, public policy, evidentiary, and case management problems inherent in this litigation. From the day this lawsuit was filed, it has garnered much media attention. Recognizing this, the Court hopes to assist the intrepid reader with her task by explaining certain principles and procedures that it has followed.

First and foremost, the Court has decided that, as fact finder, its obligation is to present to the appellate courts, the parties, and the public all the relevant facts which have been proven by a preponderance of this massive body of evidence consisting of testimony (including written direct examination, in-court cross examination, and re-direct examination of witnesses in this trial, as well as deposition and trial testimony of witnesses in related cases), and thousands of exhibits. By virtue of this

procedure, the appellate courts will have before them all the factual determinations they need to decide the numerous legal issues which will unquestionably be raised.

Certain consequences flow from the decision to present the most complete factual picture possible. Even though this Opinion is unusually long and detailed, on occasion, there are very few facts presented on important issues and questions leap off the page to the reader. In those instances, it should be understood that the parties presented no further evidence and the Court has stated whatever Findings can be appropriately made on whatever evidence does exist; the record must remain bare as to the unanswered questions and the gaps in the evidence. On other occasions, some individual factual findings may appear unclear or inconsistent with other factual findings. In those instances, the Conclusion to that Section will contain the Court's final Findings, and its reasons for reaching them.

Second, in an effort to make the substance of the Opinion as accessible as possible, almost every Section of the Opinion in both the Findings of Fact and the Conclusions of Law contains an Introduction that provides an overview of the subject matter to be covered and a Conclusion that summarizes what has been found in that Section; the extensive detailed Findings between the Introduction and the Conclusion provide the factual "meat" between the two. In a few instances, Sections are so brief or so self-evident that no Introduction or Conclusion was necessary. Finally, Appendix I contains a Glossary of frequently used terms and concepts; Appendix II contains the relevant Surgeon Generals' Reports and their major findings; and Appendix III contains all the Racketeering Acts charged by the Government.

Third, every effort has been made to make each Section self-contained so that it is complete and understandable in and of itself. Thus, a reader who is interested in only a particular topic, such as youth marketing, can pick up that Section, and obtain the information he needs without having to read the entire Findings of Fact. However, it has been virtually impossible to totally segregate the Findings presented in each Section. At times, the historical

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data, the scientific data, and the relevant documentary materials overlap subject matter areas and therefore must be repeated in order to ensure that a Section can be read and understood by itself. By the same token, many individuals are identified numerous times in the text in an effort to make it easier for the reader to follow the narrative rather than having to search through many pages to re-familiarize himself with a person's position within either a Government agency or one of the Defendant corporations.

Fourth, specific record citations have been given whenever possible. Many times an individual Finding of Fact is either a direct quote from a witness's written or oral testimony or is taken directly from a proposed finding submitted by one of the parties and supported by the record and proved by at least a preponderance of the evidence. Vast amounts of testimony were given—by eminent and respected scientists, government officials and corporate executives. Only the portions of their testimony specifically cited in the Opinion were affirmatively credited and relied on by the Court. The Court has made it very clear when specific evidence referred to is being rejected or discredited.

Fifth, parties should understand that every Exhibit and Prior Testimony cited in the Findings of Fact is deemed admitted into evidence. A formal Order, accompanying this Opinion, will be entered listing

those hundreds (perhaps thousands) of Exhibit numbers and Prior Testimonies, overruling any objections made thereto.

Sixth, several observations need be made about witness bias and credibility. For the most part, each individual Chapter in the Findings of Fact explains why certain facts were found, why certain witnesses were credited, and why the testimony of certain witnesses was either discredited as just plain not believable or, in most instances, outweighed by other more convincing and credible evidence.

Most of the witnesses whose testimony was most vehemently attacked by the Defendants (such as Dr. David R. Kessler,² Dr. Michael C. Fiore, Dr. Jeffrey Wigand, and Dr. Cheryl Healton) were only relied upon for undisputed or relatively insignificant background facts (as with Dr. Kessler and Dr. Wigand), or testified about remedies which this Court could not consider on the merits under the Court of Appeals decision discussed above (as in the case of Dr. Fiore and Dr. Healton).

Much of the Defendants' criticisms of Government witnesses focused on the fact that these witnesses had been long-time, devoted members of "the public health community." To suggest that they were presenting inaccurate, untruthful, or unreliable testimony because they had spent their professional lives trying to improve the public health of this country is patently absurd. It is equivalent to arguing that all the Defendants' witnesses were biased, inaccurate, untruthful, and unreliable because the great majority of them had earned enormous amounts of money working and/or consulting for Defendants and other large corporations, and therefore were so devoted to the cause of corporate America that nothing they testified to, even though presented under oath in a court of law, should be believed. Such simplistic attacks on the credibility of the sophisticated and knowledgeable witnesses who testified in this case are foolish.

All of this is not to deny that there were significant differences in the overall qualification

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of the Government's witnesses and the Defendants' witnesses. There were. The Government's witnesses, viewed as a whole, were far more experienced, credentialed, and active in the area of smoking and health, whatever their particular area of specialty, than were the Defendants'. Many of the Government experts had participated extensively, over many years, in the long and drawn-out process of ascertaining the consensus of scientific opinions embodied in each Surgeon General's Report. Virtually every one had taught at a well-regarded academic institution and written numerous peer-reviewed articles in their particular area of specialty. Many of the Government witnesses continued "hands on," clinical work in their fields despite heavy commitments for research, writing, teaching, and lecturing to their peers.

The Defendants' witnesses were obviously well educated in their areas of specialty. Indeed, as was mentioned on many occasions, Defendants even presented the testimony of an impressive Nobel Prize winner. However, rarely did these witnesses have the depth and breadth of experience of the Government witnesses. Many had worked only in large corporations, and many for only one or two such employers. Many—although not all—had written relatively few peer-reviewed articles. Many of the highest paid experts of Defendants, while well credentialed in their particular fields, such as economics, presented relatively narrow testimony tailored to the particular problem or issue they were retained to opine on for purposes of this litigation. A few of Defendants' experts had done virtually no individual

research and written virtually no peer-reviewed articles, and a few were unfamiliar with the relevant facts and/or the major scientific literature on the issue about which they testified.

While the testimony of each person— expert or fact witness—was evaluated on its own merits, there can be no denying that, as a group, the Government's witnesses were far more knowledgeable, experienced, and active in their respective fields.

Finally, despite the length and detail of the Findings of Fact, the evidentiary picture must be viewed in its totality in order to fully appreciate how massive the case is against the Defendants, how irresponsible their actions have been, and how heedless they have been of the public welfare and the suffering caused by the cigarettes they se11.3

II. PROCEDURAL HISTORY

Plaintiff, the United States of America ("the Government") brought this suit in 1999 against eleven tobacco-related entities ("Defendants")⁴ to recover health care

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expenditures the Government has paid or will pay to treat tobacco-related illnesses allegedly caused by Defendants' unlawful conduct. The Government also asked this Court to enjoin Defendants from engaging in fraudulent and other unlawful conduct and to order Defendants to disgorge the proceeds of their past unlawful activity.

In its original Complaint, the Government made four claims against Defendants under three federal statutes. The first statute, the Medical Care Recovery Act ("MCRA"), 42 U.S.C. §§ 2651-2653, provides the Government with a cause of action to recover certain specified health care costs it pays to treat individuals injured by a third-party's tortious conduct (Count 1). The second statute is a series of amendments referred to as the Medicare Secondary Payer provisions ("MSP"), 42 U.S.C. § 1395y, which provides the Government with a cause of action to recover Medicare expenditures when a third party caused an injury requiring treatment and a "primary payer" was obligated to pay for the treatment (Count 2). The third statute is the Racketeer Influenced and Corrupt Organizations Act ("RICO"), 18 U.S.C. §§ 1961-1968 (Counts 3 and 4), which provides private parties with a cause of action to recover treble damages due to injuries they received from a defendant's unlawful racketeering activity and the government with a cause of action to seek other equitable remedies to prevent future unlawful acts. Joint Defendants moved to dismiss the case on all counts. On September 28, 2000, the Motion was granted in part and denied in part, and Counts 1 and 2 were dismissed. *United States v. Philip Morris, Inc.*, 116 F.Supp.2d 131 (D.D.C.2000).

Continuing its case on Counts 3 and 4, the Government sought injunctive relief and \$289 billion⁵ in disgorgement of Defendants' ill-gotten gains for what it alleges to be an unlawful conspiracy to deceive the American public. The Government's Amended Complaint describes a four-decade long conspiracy, dating back to at least 1953, to intentionally and willfully deceive and mislead the American public about, inter alia, the harmful nature of tobacco products, the addictive nature of nicotine, and harmfulness of low tar cigarettes. Amended Complaint ("Am.Compl.") at ¶ 3. According to the Government, the underlying strategy Defendants adopted was to deny that smoking caused disease and to consistently maintain that whether smoking caused any kind of disease was still an "open question" for which no scientific consensus existed. Am. Compl. at ¶ 34. In furtherance of that strategy,

Defendants allegedly issued deceptive press releases, published false and misleading articles, destroyed and concealed documents which indicated that there was in fact a correlation between smoking and disease, and aggressively targeted children as potential

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new smokers. Am. Compl. at ¶ 36.6

The parties engaged in intensive discovery for more than two years, with the assistance of Special Master Richard Levie overseeing disputes and issuing 172 Reports and Recommendations, the majority of which were appealed to this Court. During discovery, the parties exchanged over 4,000 requests for production of documents. Defendant alone made available to the Government over 26 million pages of documents. In addition, the parties each took over 1,000 hours of depositions. As discovery progressed and trial loomed, the Court held regularly scheduled and, when events necessitated it, irregularly scheduled status conferences and conference calls and oversaw the filing of many status reports and praecipes.

In addition, the parties filed, pursuant to limitations imposed by the Court, 18 summary judgment motions and countless motions in limine. The Court granted all of the Government's Motions for partial summary judgment to dismiss Defendants' Affirmative Defenses based on: (1) the assertion that the Federal Trade Commission had exclusive authority over Defendants' marketing activities (Order # 356); (2) waiver, equitable estoppel, laches, unclean hands and in pari delicto (Order # 476); (3) the assertion that the Government's claims and remedies sought violated the 8th Amendment of the Constitution and the Ex Post Facto Clause (Order # 509); (4) the assertion that constitutional separation of powers precludes the Government's claims (Order # 510); (5) the assertion that the RICO claims and relief sought are prohibited by the 10th Amendment of the Constitution and by separation of powers and that Defendants are not jointly and severally liable for any disgorgement ordered by the Court (Order # 538); and (6) res judicata, collateral estoppel, release, accord and satisfaction, and mootness (Order # 586). In addition, the Court granted the Government's Motions for partial summary judgment that each Defendant is distinct from the RICO enterprise (if the Court were to determine that there is an enterprise) and that a Defendants' liability for a RICO conspiracy does not require that Defendant to participate in the operation or management of the Enterprise (Order # 591). All other summary judgment motions of the Government and the Defendants were denied because the existence of material facts in dispute rendered summary judgment inappropriate.

Upon resolution of all preliminary matters, trial began on September 21, 2004. Together, the parties presented eighty four witnesses and tens of thousands of exhibits. The trial lasted nine months.

On February 4, 2004, our Circuit rendered a decision on an interlocutory appeal from this case. Defendants had appealed this Court's decision denying summary judgment as to the Government's claim for disgorgement under 18 U.S.C.1964(a). (Order # 550). In that opinion, written by Judge David Sentelle, the Court of Appeals determined that disgorgement is not a permissible remedy in civil RICO cases. *United States of America v. Philip Morris USA Inc., et al.*, 396 F.3d 1190 (D.C.Cir. 2005). As a result, because \$280 billion in disgorgement was the centerpiece of its requested relief, the Government moved for leave to reformulate their proposed remedies. The Court granted that motion. After the liability phase of the trial concluded, the parties were allowed to put on

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evidence pertaining to the remedies sought by the Government.

At the conclusion of the remedies trial, several entities and organizations moved to intervene in order to assert their interests in the proposed relief. The Court granted the Motions to Intervene for the following parties: American Cancer Society; American Heart Association; American Lung Association; Americans for Nonsmokers' Rights; National African American Tobacco Prevention Network; and Tobacco-Free Kids Action Fund. These parties had a clear interest in advancing the public health and in the remedies proposed in this case.

In addition, the Court received numerous motions for leave to appear as amicus curiae, in support of the United States, from organizations who also wanted to assert their views on the appropriate and necessary remedies in this case. The Court granted the Motions of the following states and organizations because of their enormous collective knowledge and experience in the fields of public health, smoking, and disease: Arkansas; Connecticut; Hawaii; Idaho; Iowa; Kentucky; Louisiana; Maryland; Massachusetts; Nevada; New Jersey; New Mexico; New York; Ohio; Oklahoma; Oregon; Tennessee; Vermont; Washington; Wisconsin; Wyoming; and the District of Columbia.; Citizens' Commission to Protect the Truth; Regents of the University of California; Tobacco Control Legal Consortium, including 18 additional nonprofit organizations; Essential Action; the City and County of San Francisco; the Asian Pacific Island American Health Forum; San Francisco African-American Tobacco Free Project; Black Network in Children's Emotional Health.⁷

On August 8, 2005, each side simultaneously submitted its 2,500 page Proposed Findings of Fact. As August turned into September, the Government filed its 250 page opening Post-trial brief; Defendants filed their 250 page opposition to the Government's brief and their 50 page opening brief on affirmative defenses; the Government filed its 100 page reply brief and 50 page opposition to Defendants' brief on affirmative defenses; and Defendants filed their 20 page reply brief on affirmative defenses.

The Court has issued 1010 Orders during the course of this arduous litigation. Some pundits have opined that this is the largest piece of civil litigation ever brought. The Court will leave that judgment to others.

FINDINGS OF FACT U.S. v. Philip Morris USA, Inc., 449 F.Supp.2d 1 (D. D.C., 2006)

* * * *

E. Defendants Falsely Marketed and Promoted Low Tar/Light Cigarettes as Less Harmful than Full-Flavor Cigarettes in Order to Keep People Smoking and Sustain Corporate Revenues

2023. For several decades, Defendants have marketed and promoted their low tar brands as being less harmful than conventional cigarettes. That claim is false, as these Findings of Fact demonstrate. By making these false claims, Defendants have given smokers an acceptable alternative to quitting smoking, as well as an excuse for not quitting.

2024. Defendants used a combination of techniques to market and promote their low tar brands. Defendants' marketing has emphasized claims of low tar and nicotine delivery accompanied by statements that smoking these brands would reduce exposure to the "controversial" elements of cigarette smoke (i.e., tar). Since the 1970s, Defendants also have used so-called brand descriptors such as "light" and "ultra light" to communicate reassuring messages that these are healthier cigarettes and to suggest that smoking low tar cigarettes is an acceptable alternative to quitting. In addition to appealing advertising and easily-remembered brand descriptors, Defendants have used sophisticated marketing imagery such as lighter color cigarette packaging and white tipping paper to reinforce the same message that these brands were low in tar and therefore less harmful. See Section V(E)(5), *infra* (Defendants' deceptive marketing of low tar cigarettes).

2025. Even as they engaged in a campaign to market and promote filtered and low tar cigarettes as less harmful than conventional ones, Defendants either lacked evidence to substantiate their claims or knew them to be false. Indeed, internal industry documents reveal Defendants' awareness by the late 1960s/early

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1970s that, because low tar cigarettes do not actually deliver the low levels of tar and nicotine which are advertised, they are unlikely to provide any clear health benefit to human smokers, as opposed to the FTC smoking machine, when compared to regular, full flavor cigarettes.

2026. As Defendants have long been aware, nicotine delivered by cigarettes is addictive (see Section V(B)(3), *supra* (addiction)). Defendants' internal documents demonstrate their understanding that, in order to obtain an amount of nicotine sufficient to satisfy their addiction, smokers of low tar cigarettes modify their smoking behavior, or "compensate," for the reduced nicotine yields by taking more frequent puffs, inhaling smoke more deeply, holding smoke in their lungs longer, covering cigarette ventilation holes with fingers or lips, and/or smoking more cigarettes. See Section V(E)(2)(b), *infra* (smoker compensation). As a result of this nicotine-driven smoker behavior, smokers of light cigarettes boost their intake of tar, thus negating what Defendants have long promoted as the primary health-related benefit of light cigarettes: lower tar intake.

2027. Defendants did not disclose the full extent and depth of their knowledge and understanding of smoker compensation to the public health community or to government regulators.

2028. Defendants' conduct relating to low tar cigarettes was intended to further their overarching economic goal: to keep smokers smoking; to stop smokers from quitting; to encourage people, especially young people, to start smoking; and to maintain or increase corporate profits.

1. Low Tar/Light Cigarettes Offer No Clear Health Benefit over Regular Cigarettes

a. History of Health Claims

2029. In the early 1950s, on the heels of a series of studies linking smoking and disease, the Defendant cigarette manufacturers began making health claims, often using models in doctors' white coats, in their advertising:

American Tobacco Co. made representations "that its cigarettes were less irritating to the throat than competing brands, offered one's throat protection, were easy on one's throat, and provided

protection against throat irritation and coughing" Federal Trade Commission, In the Matter of American Tobacco Co., Complaint, Findings, and Order in Regard to the Alleged Violation of Sec. 5 of an Act of Congress Approved Sept. 26, 1914 (47 F.T.C. 1393), decided June 20, 1951.

R.J. Reynolds Tobacco Co. "represented to the public ... that the smoking of such cigarettes . . . aided digestion"; "represented that the wind and physical condition of athletes would not be impaired by the smoking of as many Camel cigarettes as desired"; and "represented that the smoking of Camel cigarettes was soothing, restful, and comforting to the nerves, and protected one against becoming `jittery' or `unsure' when subjected to intense nerve strain" Federal Trade Commission, In the Matter of R.J. Reynolds Tobacco Co., Complaint, Findings, and Order in Regard to the Alleged Violation of Sec. 5 of an Act of Congress Approved Sept. 26, 1914 (46 F.T.C. 706), decided March 31, 1950.

Liggett & Myers Tobacco Co. represented "directly or by implication, that Chesterfield cigarettes can be smoked by an [sic] smoker without inducing any adverse affect upon the nose, throat and accessory organs of the smoker." FTC v. Liggett & Myers Tobacco Co., 108 F.Supp. 573 (S.D.N.Y.1952).

Lorillard made comparisons between the tar and nicotine yields of its cigarettes

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and those of its competitors. For example, Old Gold advertisements included statements that Old Gold was "lowest in nicotine and throat irritating tars and resins when compared with 6 other leading brands." Langenfeld WD at 42:5-10 (citing In the Matter of P. Lorillard Co., 46 F.T.C. 735 (1950)).

2030. As discussed in great detail in section V(E)(1)(a), *infra*, the FTC successfully prosecuted the Defendant cigarette manufacturers' for some of these health claims. See In the Matter of American Tobacco Co., 47 F.T.C. 1393 (F.T.C.1951); R.J. Reynolds Tobacco Co., 46 F.T.C. 706 (1950), modified, 192 F.2d 535 (7th Cir. 1951), on remand, 48 F.T.C. 682 (1952); Federal Trade Commission v. Liggett & Myers Tobacco Co., 108 F.Supp. 573 (S.D.N.Y.1952), affirmed on opinion below, 203 F.2d 955 (2d Cir.1953); P. Lorillard Co. v. Federal Trade Commission, 186 F.2d 52, 56-57 (4th Cir.1950).

2031. Those prosecutions led to public calls for a ban on advertisements containing such health claims. (no bates) (JD 043377) (Advertising Age (Dec. 21, 1953)) ("Cigarette advertisers were urged today by the National Better Business Bureau to adopt an eight point code to eliminate unfounded health claims in cigarette advertising.").

2032. Given the public's concern over tar and lung cancer, the "White Coat" ads of the 1940s and early 1950s gradually disappeared, and a wave of ads featuring claims about filtration and tar reduction became the new basis for competition. See (no bates) (JD 000636 at 5) (1981 Surgeon General's Report) ("In the 1950s, cigarette manufacturers introduced cigarette filters as `health protection' and advertised them widely."); Harris TT, 10/18/04, 2783:15-18.

2033. Defendants competed through comparative filtration ads in the period following 1953. (no bates) (U.S. 58700 at 199) (NCI Monograph 13) ("Companies initially responded to this health scare by introducing filtered products that were accompanied by advertisements with explicit health-related statements.").

2034. In 1954, the FTC issued a letter to all tobacco companies announcing its intention to adopt uniform standards for cigarette advertising "to prevent the use of false or misleading claims." (no bates)

(JD 000332 at 276) (False & Misleading Advertising (Filter-Tip Cigarettes), Hearings before the House Subcomm. of the Comm. on Gov't Operations, 85th Cong. (1957)). During the ensuing negotiations with cigarette manufacturers, the FTC advised the industry to conform its advertising with FTC decisions, "including decisions finding that comparisons of tar and nicotine between brands were false and misleading." *Id.*

2035. In 1955, the FTC adopted the "Cigarette Advertising Guides," proscribing any implicit or explicit health claims in cigarette advertising. The Guides did, however, provide a limited exception to this general rule, for what the FTC believed were implicit health claims. This exception allowed comparative ads claiming that a cigarette was "low in nicotine or tars," provided it has "been established by competent scientific proof applicable at the time of dissemination that the claim is true, and if true, that such difference or differences are significant." 50202 3956-57 (JD 003616 at 2) (FTC Press Release of 9/22/55 (Cigarette Advertising Guides)); (no bates) (JD 021949) (4 Trade Reg. (CCH) ¶ 39,012 (1995)). At the same time, some members of the public health community urged the development and adoption of cigarettes with reduced tar yields. Harris TT, 10/18/04, 2782:7-13; Burns TT, 2/15/05, 13357:8-16; Townsend WD, 80:22-81:10.

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2036. By the mid to late 1950s, the American cigarette manufacturers responded with a heated "tar derby" of competing claims about the effectiveness of various filters: "[C]igarette companies advertised that certain brands were lower in tar and nicotine and, by implication, less dangerous." (no bates) (JD 001032 at 1-49, n. 174) (FTC Staff Report on the Cigarette Advertising Investigation (May 1981)); see also (no bates) (JD 004344 at 8343) (Unfair or Deceptive Advertising & Labeling of Cigarettes in Relation to the Health Hazards of Smoking, 29 Fed.Reg. 8324 (June 22, 1964)).

2037. Smokers responded too, switching in droves to filtered cigarettes. Krugman TT, 12/15/04, 8603:8-14; (no bates) (U.S. 58700 Fig. 4-3, at 93).

2038. However, Congress and the FTC perceived that the resulting competition was confusing since different cigarette manufacturers sought to substantiate their "low tar" claims based on different "scientific" testing methods. (no bates) (JD 000332 at 276) (False & Misleading Advertising (Filter-Tip Cigarettes), Hearings Before a Subcomm. of the House Comm. on Gov't Operations, 85th Cong. (1957)) (discussing lack of standardized test method).

2039. Faced with the "tar derby" and perceived consumer confusion, the FTC concluded that, "[i]n the absence of uniform testing procedures, it was impossible to make claims about 'tar' and nicotine levels that could be substantiated" (no bates) (JD 001032 at 1-49, n. 174) (FTC Staff Report on the Cigarette Advertising Investigation (May 1981)). Accordingly, in 1959, the FTC called a halt to the "tar derby" and "reiterated its view that tar and nicotine claims would be regarded as conveying the additional claim that lower levels of tar and nicotine reduced health risks." (no bates) (JD 000435 at 41) (J. Calfee, Cigarette Advertising, Health Information and Regulation Before 1970, Working Paper No. 134 (Dec.1985)).

2040. "[T]he position taken by the FTC at this time was that the simple fact of listing tar and nicotine deliveries ... constituted an implied health claim," because the "implication was that these cigarettes would be less hazardous or less harmful." Harris TT, 10/19/04, 2902:19-2903:3. On December 17, 1959,

the FTC informed tobacco manufacturers that it henceforth would bar all health claims in advertising, including "all representations of low or reduced tar or nicotine, whether by filtration or otherwise." 1005150070 (JD 004534). The FTC further "inform[ed] the industry that in its opinion the evidence then available would support a complaint against any marketer who made any reference to tar or nicotine content, charging that such a reference was false and misleading." 670310575-588 (JD 040931 at 3).

2041. A month later, the FTC requested that the cigarette manufacturers agree to make no references to tar and nicotine in their advertising, and the manufacturers agreed. 1005150056-57 (JD 004535); 1005150051-52 (JD 003617).

b. The FTC Method

2042. The FTC thought the 1964 Surgeon General's Report provided "an evidentiary foundation to support a Rule requiring a positive statement [of average 'tar' and nicotine yields] in [cigarette] labeling and advertising." Letter of 4/11/66 from Paul Rand Dixon, FTC Chairman, to Sen. Warren Magnuson (670310575-588), JD 040931 (at 3).

2043. Within a week of the issuance of the 1964 Surgeon General's Report, the FTC proposed a Trade Regulation Rule that, among other things, would permit the advertising of tar and nicotine yields, provided

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that such advertising was "verified in accordance with a uniform and reliable testing procedure approved by the Federal Trade Commission." 29 Fed.Reg. 530, (no bates) (JD 040184 at 532); 29 Fed.Reg. 8324 (1964), (no bates) (JD 004344 at 8355-56).

2044. According to the FTC, "[c]onfusion can be obviated, and the ability of consumers to make an intelligent choice among competing brands protected, only if the measurement of cigarette-smoke ingredients accords with a uniform, fully reliable and approved testing procedure." 670310575-588 (JD 040931 at 4).

2045. "[T]here was substantial support for the proposition that an accurate statement of tar and nicotine content would be in the public interest . . ." 0002905512 (JD 004537 at 5512).

2046. The National Interagency Council on Smoking and Health "hope[d] that [the FTC would] take the steps necessary to make it permissible for cigarette manufacturers to list tar and nicotine content on the labels of cigarette packages." 670310575-588 (JD 040931 at 8); 1002905514 (JD 004537).

2047. The American Cancer Society, the American College Health Association, the Roswell Park Memorial Institute, and others expressed support for the proposed rule. 1002905512-5519 at 5514-5519 (JD-004537).

2048. On March 24, 1966, the FTC notified cigarette manufacturers that they would be permitted to advertise tar and nicotine yields provided they used the Cambridge Filter Method, as published by Dr. C.L. Ogg of the U.S. Department of Agriculture, to substantiate any yield claims, and so long as "no collateral representations" were made as to the "reduction or elimination of health hazards" from lower yield cigarettes. (no bates) (JD 004538); see also 680236589 (JD 004612); (no bates) (JD 001032 at 4-3).

2049. The FTC Cambridge Filter Method uses a machine to "smoke" the cigarette for a designated puff volume at a designated interval for a designated period of time. As the smoke is drawn into the machine, it passes over a filter known as a Cambridge pad, on which the particulate tar matter is collected. That accumulated matter is measured to calculate the tar and nicotine yields for the cigarette. The FTC Method was developed to provide consumers with a relative ranking of nicotine, tar, and carbon monoxide yields from any cigarettes that were tested. Henningfield WD, 47:11-48:2; Henningfield TT, 11/22/04, 6794:8-6796:6.

2050. When the FTC gave manufacturers permission to make disclosures of tar and nicotine yields, it "recognized that the result would be that consumers would, in fact, believe that lowered delivery cigarettes were less hazardous and less harmful." Harris TT, 10/19/04, 2913:20-24.

2051. The FTC's change in policy to permit these claims was designed to achieve two goals: provide consumers with an incentive to smoke the lower tar/nicotine cigarettes rather than the higher tar/conventional cigarettes and give manufacturers a competitive incentive to produce cigarettes with low levels of tar and nicotine. Harris TT, 10/19/04, 2909:1-25.

2052. The federal government wanted to provide consumers with information that they could use to compare brands. See, e.g., FTCDOCS 0259-1751-1793 (JD 004353 at 1) ("The `tar' and nicotine testing program was intended to provide smokers seeking to switch to lower `tar' cigarettes with a single, standardized measurement with which to choose among the then-existing brands.").

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2053. In addition, given the premise of a dose-response relationship—i.e., more tar equals more disease risk—the FTC wanted to encourage competition among the cigarette manufacturers, thereby increasing the research, development, and production of cigarettes with lower FTC-measured tar yields. See, e.g., (no bates) (JD 043418 at 17) ("Based upon the proposition that lower yield cigarettes present a lessened hazard to the American public," the FTC has acted to "prompt cigarette manufacturers to develop less hazardous cigarettes."); see also (no bates) (JD 004615 at 1) (Sen. Warren G. Magnuson, News Release, Nov. 27, 1967) ("The results of the first government tests ranking cigarette brands by tar and nicotine levels were released today . . . Hopefully, the wide dissemination of this information and the growing awareness of its significance among the smoking public will channel competition in the cigarette industry toward the marketing of cigarettes of progressively lower tar and nicotine content.").

2054. The theory was that the public would shift its consumption away from higher tar products, and toward lower tar products, just as it had done with the advent of filter-tipped cigarettes. In this way, it was anticipated that the national sales-weighted-average tar yields of cigarettes sold in the United States would decline, and the public health would benefit. (no bates) (JD 053570 at 1).

2055. On July 31, 1967, the FTC directed its staff to commence "formal test[ing]" of cigarettes using the Cambridge Filter Test. (no bates) (JD 002477 at 2064360211); (no bates) (JD 004348 at 1).

2056. On August 8, 1970, the FTC proposed a rule to mandate disclosure of tar and nicotine ratings in all cigarette advertising. (no bates) (JD 004350).

2057. The FTC also invited the cigarette manufacturers to submit a voluntary proposal, in lieu of the proposed rule, for such disclosures in cigarette advertising. 2023098316 (JD 040304) ("If the industry can devise a voluntary plan that is feasible and appropriate, the Commission is willing to consider it.").

2058. The tobacco companies complied, (no bates) (JD 040305), and the FTC solicited public comment on the industry plan. 1005045883-84 (JD 041337); (no bates) (JD 002066).

2059. Ultimately, the FTC agreed to allow tobacco companies make certain disclosures about tar and nicotine content in cigarette advertising instead of issuing a formal rule. On December 22, 1970, the FTC formally adopted a revised version of the cigarette manufacturers' proposal for displaying FTC tar and nicotine ratings in all advertising. The agreement was implemented by the FTC on January 13, 1971, as a substitute for its proposed trade regulation rule requiring such disclosure. 1005045883-84 (JD 041337); (no bates) (JD 003634).

2060. The FTC concluded that the voluntary agreement to provide "tar and nicotine disclosure and the voluntary agreement ... to put the Surgeon General's health warning on the side of the pack in advertisements . . . [were] highly responsible activit[ies] by" the cigarette manufacturers. Public Health Cigarette Amendments of 1971, Hearings on S. 1454 before the Consumer Subcomm. of the Senate Comm. on Commerce, 92nd Cong. (1972) (statement of Robert Pitofsky, Dir., Bureau of Consumer Protection); (no bates) (JD 042276 at 58).

c. The FTC Method Does Not Measure Actual Tar and Nicotine Delivery

2061. Within months after it notified cigarette manufacturers on March 24, 1996

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of its decision to allow advertising of tar and nicotine yields so long as the Cambridge Filter Method was used, the FTC invited cigarette manufacturers to comment in detail on the precise method to be used to measure tar and nicotine yields. See, e.g., (no bates) (JD 040780); (no bates) (JD 003620).²⁴

2062. Defendants "initially resisted imposition of the Cambridge testing method and claimed it would be inaccurate" because different smokers "smoke differently—and even smoke differently at different times." Henningfield WD, 48:3-50:12. This is known as smoker variation. Early in the FTC process of developing a standard testing method, Defendants advised the Agency that, because of smoker variation, the Cambridge Filter Method would not measure the tar or nicotine that a human being would ingest from smoking any particular cigarette:

No two human smokers smoke in the same way. No individual smoker always smokes in the same fashion. The speed at which one smokes varies both among smokers, and usually also varies with the same individual under different circumstances even within the same day. Some take long puffs (or draws); some take short puffs. That variation affects the [tar and nicotine] quantity in the smoke generated.

(no bates) (JD 004362 at 2). See also United States' Obj. and Answers to Joint Defs' Modified Eleventh Set of Req. for Admis. to the Pl. United States, RFA Resp. 5, 49-50, 54 (4/12/02) (The Government admits that in 1966, during the comment period for discussion of the Cambridge method, certain tobacco companies stated that the FTC method would only be an effective measurement for certain conditions of smoking behavior).

2063. The FTC also heard from, among others, Clyde L. Ogg, Ph.D., of USDA, who developed the method initially adopted by the FTC. He admitted that: "Since smokers vary so greatly in their smoking habits, the proposed ... method will not tell a smoker how much tar and nicotine he will get from any given cigarette. It will indicate, however, whether he will get more from one than from another cigarette if there is a significant difference between the two and if he smokes the two in the same manner." (no bates) (JD 004748 at 38).

2064. The FTC's press release announcing its decision clearly described the limitations of the standardized test method it was adopting. (no bates) (JE 061264 at 1-2). The FTC stated:

No test can precisely duplicate conditions of actual human smoking and, within fairly wide limits, no one method can be said to be either "right" or "wrong." The Commission considers it most important that the test results be based on a reasonable standardized method and that they be capable of being presented to the public in a manner that is readily understandable . . . [T]he public interest requires that all test results presented to the public be based on a uniform method used by all laboratories. Use of more than one testing method would produce different results which would only serve to confuse or mislead the public.

The Cambridge Filter Method does not and cannot measure these many variations in human smoking habits It does not measure all of the tar and nicotine in any cigarette, but only that in

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the smoke drawn in the standardized machine smoking according to the prescribed method. Thus, the purpose of testing is not to determine the amount of tar and nicotine inhaled by any human smoker, but rather to determine the amount of tar and nicotine generated when a cigarette is smoked by machine in accordance with the prescribed method.

(no bates) (JE 061264 at 1-2).

2065. On that same day, the Tobacco Institute issued a press release stating that the FTC method was "unsound" and declaring that the "tar" and nicotine results" produced by the FTC method "may be inaccurate [and] misleading" to consumers. Tobacco Institute Press Release, Tobacco Institute Says FTC Chose Unsound Test Methods: "Tar" and Nicotine Results May Be Inaccurate, Misleading, Aug. 1, 1967, 500031952-1955 (JD 047658 at 1). Among other things, the press release pointed out that humans smoke cigarettes differently and that "per cigarette" tar and nicotine yields therefore would be "useless and misleading" to smokers who do not smoke within the FTC parameters. (no bates) (JD 047658 at 1).

2066. Defendants did not, however, disclose their knowledge that smokers would ultimately ingest as much if not more nicotine and tar from low-delivery cigarettes as they would from full-flavor products. Defendants knew that the phenomenon of smoker compensation, discussed in greater detail *infra*, would cause smokers to smoke low-delivery products more intensely and more frequently in order to obtain their desired level of nicotine. To feed their addiction, therefore, these smokers would defeat the stated purpose of the lower-delivery products. Henningfield WD, 48:3-50:12. Nor did Defendants disclose to the FTC that "a major reason that the method could yield misleading data was that nicotine addiction would drive smokers to achieve relatively stable nicotine intakes" and that smokers'"physiological need to obtain nicotine substantially lessens the accuracy of the FTC ratings." Henningfield WD, 48-14-49:7. According to Dr. Farone, Defendants did not inform the FTC in 1966 "that

smokers alter their smoking behavior to get nicotine." Nor did Defendants tell the FTC that people's "smoking behavior was driven by the need to satisfy their nicotine addiction." Farone TT, 10/12/04, 2170:5-23.

2067. There is a dose-response relationship between smoking and lung cancer. That is, the less smoke to which smokers are exposed, the lower their lung cancer risk. Benowitz TT, 11/1/04, 4521:13-16; Townsend WD, 80:9-18. The predicate for the development and marketing of lower FTC-yield cigarettes was the expectation that, as a group, smokers of lower FTC-yield cigarettes would be exposed to less smoke. Townsend WD, 80:9-18.

2068. Because of compensation and the need of smokers to obtain a desired dose of nicotine, they may offset the decrease in their cigarettes' FTC tar and nicotine yields, in whole or in part, by one of two means. First, smokers may engage in so-called "puff" or "within cigarette compensation." This is done by smoking individual, lower FTC-yield cigarettes more intensively by taking bigger puffs, taking more frequent puffs, smoking the cigarette closer to the butt, blocking ventilation holes placed in the filter that dilute the smoke, or other means. Second, they may simply smoke more cigarettes. Benowitz TT, 11/1/04, 4512:11-4513:1; Dixon WD, 16:13-21.

2069. The issue of compensation has been discussed in the scientific literature since at least the 1940s. Benowitz TT, 11/1/04, 4526:19-4527:3. The early literature on nicotine, including compensation,

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was summarized in a well respected compendium of articles collected by Larson, P.S. et al., in *Tobacco: Experimental and Clinical Studies: A Comprehensive Account of the World Literature* (Baltimore, Williams & Wilkins Co.1961). (no bates) (JD 000500); Rowell WD, 17:4-17. This useful research tool was cited repeatedly in the 1964 Surgeon General's Report. Rowell WD,18:1-18. The Larson volume was funded by TIRC. McAllister WD, 102:9-22; Rowell WD, 17:18-20.

2070. It was a "common concern" in the early 1960s that smokers who switched to filtered cigarettes might "compensate" by smoking more cigarettes each day. Burns TT, 2/16/05, 13580:18-13581:7; see also Samet TT, 9/29/04, 1183:5-9.

2071. "Compensatory smoking behavior is a manifestation of nicotine addiction," and "occurs primarily due to nicotine." Dr. Benowitz described "the consensus in the medical and scientific fields" regarding compensation: "The concept of smoking to obtain desired levels of nicotine and the concept of nicotine titration with associated compensation is widely accepted by the scientific and public health communities." Methods of smoker compensation include taking "bigger puffs," taking "more frequent puffs," "block[ing] the ventilation holes in the filter," and smoking more cigarettes. Benowitz WD, 55:11-22, 56:22-23, 57:5-9, 57:23-1; Benowitz TT, 11/2/04, 4762:23-24, 4763:14-16. Even as to ultra low tar cigarettes, where a smoker switching down may not be able to compensate fully "on a per cigarette basis[,] . . . that smoker could always smoke more cigarettes." Farone WD, 103:18-104: 1; accord Farone TT, 10/12/04, 2169:18-19 (testifying that "the requirement for nicotine" drives smoker compensation).

2072. Because each smoker smokes to obtain his or her own particular nicotine quota, smokers end up inhaling essentially the same amount of nicotine—and tar— from so-called "low tar and nicotine" cigarettes as they would inhale from regular, "full flavor" cigarettes. This is referred to as "complete" compensation. Virtually all smokers, over 95%, compensate for nicotine. Benowitz WD, 59:6-17; 61:15-

62:13; Benowitz TT, 11/2/04, 4769:25-4770:4; (no bates) (U.S. 58700 at 10) (Monograph 13); accord Burns WD, 1:10-15, 12:10-11, 43:19-45:2; Burns TT, 2/15/05, 13311:9-15; Burns TT, 2/16/05, 13537:6-9.

2073. The amount of nicotine that smokers need to sustain their nicotine addiction does not change over time. Therefore, compensation for reduced deliveries is permanent, and occurs for as long as the smoker smokes the low tar product. Benowitz WD, 70:25-71:10; see generally DXA0310399-0650 at 0452-0476 (U.S. 58700) (Monograph 13) (indicating no evidence to warrant conclusion that there is reduction in compensation over time).

2074. Because compensation is essentially complete, low tar cigarette smokers inhale essentially the same amount of tar and nicotine as they would from full flavor cigarettes, thereby eliminating any purported health benefit from low tar cigarettes. In short, "light and ultra-light cigarettes" do not, in actuality, "reduce the risks of smoking":

Considering the overall exposure data for individuals selecting their own brand, there is little reason to expect that smokers of cigarettes with low machine measured yields will have a lower risk of disease than those who smoke higher yield cigarettes.

Benowitz WD, 72:9-14; (no bates) (U.S. 58700 at 60); see also Benowitz WD, 61:6

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13 (explaining the conclusions of Chapter 3 of NCI Monograph 13).

2075. As Dr. Benowitz pointed out, Compensation explains why smoking of light cigarettes has not been associated with a reduction of smoking-induced disease risks. One would think, looking at the FTC yield data, that toxic exposures would be substantially reduced if one switches to light cigarettes; however, because of compensation, resulting toxic exposures are similar for light and regular cigarettes.

Benowitz WD, 60:23-61:14.

2076. Despite the fact that tar deliveries, as measured by the FTC Method, decreased by more than two-thirds between 1954 and 1994, lung cancer in smokers actually increased. (no bates) (U.S. 58700) (Monograph 13); (no bates) (U.S. 76212) (1997 CDC MMWR article); see also (no bates) (U.S. 88626) (1995 Thun et al. article).

2077. Compensation behavior is distinct from "individual smoker variation":

Individual smoker variation refers to the fact that one smoker may smoke cigarettes—either regular or low tar—differently than another smoker, and that the same person may smoke the same cigarette differently on different occasions . . . Individual smoker variability relates to the fact that cigarettes are smoked differently by different individuals. This type of variability is separate and distinct from the issue of compensation, which relates to the phenomenon of smokers smoking purportedly low-delivery cigarettes more intensely in order to achieve their particular desired level of nicotine intake.

Benowitz WD, 56:6-23,

2078. In its August 1, 1967 press release, the FTC set forth the Commission's understanding of smoker variation:

No two human smokers smoke in the same way. No individual smoker always smokes in the same fashion. The speed at which one smokes varies both among smokers, and usually also varies with the same individual under different circumstances even within the same day. Some take long puffs (or draws); some take short puffs. That variation affects the tar and nicotine quantity in the smoke generated.

Even with the same type of cigarette, individual smokers take a different number of puffs per cigarette depending upon the circumstances. When concentrating, or talking, the number of puffs is usually less. When listening, or required to listen to another person talking, the number of puffs per cigarette, as well as duration of each puff, usually increases. Smoking rates while reading a book may differ from smoking rates while viewing a television program. The number of puffs and puff duration (as well as butt length) will vary according to emotional state. Some smokers customarily put their cigarettes down in an ashtray where they burn between puffs; other smokers constantly hold cigarettes in their mouths; others hold them between their fingers.

(no bates) (JD 040254 at 2); 03573029-3030 at 3029 (U.S. 22244).

2079. Significantly, the August 1, 1967 press release does not demonstrate a similar understanding of nicotine or addiction. It does not even mention nicotine and does not discuss the fact that nicotine addiction would lead smokers to obtain essentially the same amount of nicotine from so-called low tar cigarettes as they would from regular cigarettes. (no bates) (JD 040254); Farone TT, 10/12/04, 2170:5-23.

2080. Public service announcements of the Office on Smoking and Health from the early 1980s relating to the potential for

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compensation reflected a similarly incomplete and ultimately incorrect view of compensation. Rather, they "implied that the individual has within [his/her] ability automatically not to compensate; that is, that the compensation is not driven by the addictive process. That was the understanding we had in the early 1980s It was only after that [] that we understood with precision and specificity how the nicotine drives that smoking change." Burns TT, 2/16/05, 13565:8-13566:4.

2081. Defendants suggested an analogy between the FTC tar and nicotine yields and automobile gas mileage estimates, intimating that they are both useful, albeit imperfect. As Dr. Henningfield explained, this comparison is not valid:

[W]e know through that [gas mileage] rating system that if you buy a car with a better gas mileage rating, virtually no matter how you drive it, you're going to get better mileage than a car with a worse rating. But in cigarettes, by just subtle changes in the way you smoke and things that most people don't even know about, the ventilation and the channels and the burn accelerants and all these different tricks, makes those two cigarettes look the same. Thus, for example, when humans smoke Marlboro cigarettes ... Marlboro Lights can yield approximately twice as much nicotine as the Regulars are claimed to deliver by the standard FTC method. Marlboro Ultra Lights can deliver three times their advertised rating and most of the Carlton brands can deliver seven or more times their advertised rating.

Henningfield WD, 83:14-84:10.

2082. Light cigarette descriptors also "are totally different" from the information on food labels and drug labels, because "if you eat the listed serving size of [foods], you will receive the amount of [the constituents] listed on the label By contrast, . . . the advertised FTC tar and nicotine ratings for cigarettes bear very little relation to the actual dose a smoker can and, in most instances, does receive from smoking that cigarette. The inaccuracy in the FTC ratings is especially pronounced for cigarettes sold as 'light' or 'low tar' by the tobacco companies. This discrepancy is especially serious because it is in the direction of more toxins than advertised." Henningfield WD, 84:11-85:3.

2083. Dr. Whidby, a scientist, former employee, and consultant for Philip Morris USA, agreed that: "[m]easurements of tar and nicotine yields using the FTC method do not offer smokers meaningful information on the amount of tar and nicotine they will receive from a cigarette . . . [or about] the relative amounts of tar and nicotine exposure likely to be received from smoking different brands of cigarettes." Whidby TT, 2/22/05, 13993:14-19; DXA0310399-0650 at 0423, 0452-0476 (U.S. 58700).

2084. Compensation has been documented by various scientific methods. Three different kinds of studies are generally used to conduct research on compensation: (1) spontaneous brand switching studies, (2) forced brand switching studies, and (3) cross-sectional studies. Benowitz WD, 62:14-20.

2085. First, spontaneous brand switching studies are longitudinal studies that follow the same group of smokers over a specific period of time. At the start, the study measures the smokers' daily smoke exposure and records the FTC-yield of the smokers' usual brand. Later, at follow-up, the same smokers are re-contacted, at which time the study observes any change in the FTC-yield of the smokers' usual cigarette and again measures the smokers' daily smoke exposure. Benowitz WD, 62:21-63:4; Benowitz TT, 11/1/04, 4513:2-4514:3,

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especially 4513:13-21; (no bates) (U.S. 58700 at 45) (Monograph 13).

2086. Such a study permits estimation of the changes in the daily smoke exposure of those smokers who, over the course of the study, spontaneously and voluntarily switched to cigarette brands with higher or lower FTC yields, as well as any changes in the daily smoke exposure of those smokers who did not change the FTC yield of their cigarette. Benowitz WD, 63:22-64:2; Benowitz TT, 11/1/04, 4513:2-4514:3, especially 4513:13-21.

2087. Spontaneous brand switching studies, like randomized experiments, may be long term or short term. Dixon TT, 3/9/05,15051:14-15052:5.

2088. Spontaneous brand switching studies "are more informative of smokers' exposure in the real world when switching from higher to lower yield cigarettes," because "the brand of cigarette has been selected by the smoker and not by the researchers." Benowitz WD, 63:22-64:2. "[S]pontaneous brand switching studies generally show that there is no reduction in smoke intake [including nicotine and tar intake] per cigarette The per cigarette figure [is important because it] shows what an individual can take in from a particular cigarette. Thus, it provides information on the delivery characteristics of the product." *Id.* at 64:8-16, 66:3-5.

2089. There is only one complete, peerreviewed long-term spontaneous brand switching study, Lynch and Benowitz 1987, "Spontaneous Cigarette Brand Switching: Consequences for Nicotine and

Carbon Monoxide Exposure," J. Public Health, 78(9): 1191-1194, (no bates) (JD 063010); Benowitz TT, 11/2/04, 4753:11-4755:5. The study found:

a. per cigarette nicotine intake was about the same, comparing smokers who switched to lower FTC-yield cigarettes during the course of the study to their own baseline per cigarette nicotine intake. (no bates) (JD 063010 at 1192).

b. per cigarette nicotine intake was lower, comparing smokers who switched to lower FTC-yield cigarettes during the course of the study to a similar "control group" of full-flavor smokers who did not switch. Benowitz TT, 11/2/04, 4758:25-4760:13; (no bates) (JD 063010 at 1192).

2090. Only daily nicotine intake was actually measured in the study. The per cigarette nicotine values were calculated by dividing daily nicotine intake by the number of cigarettes the smokers reported they smoked per day. Benowitz TT, 11/2/04, 4758:12-18; Wecker WD, 9:9-10:3.

2091. Dr. Benowitz drew this conclusion from his study:

For smokers who switched to lower yield cigarettes, the analysis of cotinine concentration or carbon monoxide per cigarette showed no change despite the reduction in nominal machine measured yield. Therefore, these smokers obtained the same dose of nicotine and carbon monoxide from each cigarette even though the machine measured yield was lower.

Benowitz WD, 63:22-64:2. The Benowitz study demonstrated that: "For spontaneous brand switchers, there is complete compensation for each cigarette smoked. As a result, for these smokers, switching from higher to lower yield cigarettes is not likely to reduce the risk of smoking." Id. at 64:14-65:6, 65:14-17. The evidence that there is no reduction per cigarette by switching to lower tar cigarettes is particularly compelling in light of Dr. Benowitz's testimony that "we do know that on average people who are smoking lower-yield cigarettes smoke the same or even slightly

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more than higher-yield cigarettes." Benowitz WD, 63:22-64:2; 64:14-65:6; 65:14-17; Benowitz TT, 11/2/04, 4762:23-24; 4763:14-16; see also Benowitz WD, 63:5-10 (explaining that "[c]otinine is a major breakdown product of nicotine" that "is metabolized . . . by the liver" in humans, and therefore "has become the accepted marker for looking at nicotine exposure measurement from tobacco products").

2092. Based on this study, Monograph 13 concluded:

For spontaneous brand switchers, there appears to be complete compensation for nicotine delivery, reflecting more intensive smoking of lower-yield cigarettes.

* * *

Spontaneous brand-switching studies suggest that there is no reduction in smoke intake per cigarette

(no bates) (U.S. 58700 at 10 and 60); see also Dixon TT, 3/9/05, 15046:7-15047:7.

2093. There are also short-term spontaneous brand switching studies on compensation. Dixon TT, 3/9/05, 15051:14-15052:05; Dixon WD, 40:7-13.

2094. The peer-reviewed literature contains a 1999 meta-analysis of the brand switching studies that employed nicotine biomarker data. The mean estimate of the extent of compensation in that article was about 50-60%. Dixon WD, 40:14-20; see also (no bates) (JD 000547 at 1).

2095. Second, in experimental studies for forced brand switching, smokers are randomly assigned to smoke cigarettes with higher or lower FTC yields. The smokers' daily smoke exposure, as measured by various biologic markers, " is compared to see if the smokers assigned to smoke lower FTC-yield cigarettes have a lower daily smoke exposure than smokers assigned to smoke higher FTC-yield cigarettes. Benowitz WD, 68:6-9.

2096. Daily smoke exposure takes into account both forms of potential compensation—the tendency of smokers of lower FTC-yield cigarettes to smoke individual cigarettes more intensively, as well as the tendency of smokers of lower FTC-yield cigarettes to smoke more cigarettes. Benowitz TT, 11/2/04, 4739:13-4740:3; Wecker WD, 5:22-6:7.

2097. In these long-term randomized experiments on forced brand switching, smokers randomly assigned to smoke lower tar cigarettes were exposed to less smoke each day than the smokers randomly assigned to smoke higher tar cigarettes. The estimated compensation is about 75-80%, suggesting substantial but incomplete compensation. Benowitz WD, 70:19-21; Benowitz TT, 11/2/04, 4751:1-7; Wecker WD, 5:10-17.

2098. Dr. Benowitz explained that the substantial but incomplete compensation shown in the forced switching compensation studies is likely due to the act of forcing participants to switch brands:

[S]mokers are switched only for the purpose of the research. Motivation and cigarette acceptability differ from the natural situation of brand switching The forced brand switching studies show on average about eighty percent compensation Presumably compensation is not complete because the smokers have been switched to cigarettes that were not of their own choosing.

Benowitz WD, 68:6-21; 70:19-24.

2099. Third, in cross-sectional studies, the daily nicotine intake of smokers smoking their usual, voluntarily-selected brand is measured, typically using biologic markers for exposure to cigarette smoke, such as cotinine in the blood or saliva, and compared with the FTC-yield of the smokers' cigarettes. Benowitz TT, 11/2/04,4742:25-4743:11.

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2100. Cross-sectional studies also lead to the conclusion that compensation is essentially complete:

Cross-sectional studies involve sampling smokers in the general population who are smoking their own chosen brand of cigarettes ... show that there is very little difference in tobacco smoke exposure in people smoking cigarettes with different machine-determined yields There have been many cross-sectional studies performed, and overall they demonstrate that while there are some differences in nicotine exposure when high- and low-yield cigarette brands are compared, these differences are quite small. . . . Cross-sectional studies show nearly 100 percent compensation.

Benowitz WD, 66:9-68:5.

2101. In cross-sectional studies where the participants themselves choose the tar level of their cigarettes, there is a "very shallow slope" or "very tiny slope across the range of tar and nicotine" comparing the nicotine intake of smokers of various tar levels, demonstrating that smokers who smoke cigarettes of widely varied FTC tar levels are ingesting similar amounts of nicotine. This data indicates that compensation is essentially complete. As Dr. Burns explained, the fact that lower tar smokers may show, on the whole, slightly lower levels of nicotine than higher tar smokers does not mean that the lower levels are the result of the type of cigarette, but rather that the nicotine quota of smokers able to smoke lower tar cigarettes is customarily lower:

The effect is one that one would expect to be present as a small slope, since one would expect that high yield smokers would be likely to have higher nicotine levels and that the very lowest yield cigarette smokers would be there because they don't need much nicotine. That's independent of the brand of cigarettes they smoke. That's why they chose those brands. It's not an effect of the brand that they smoke. And so you would expect to see a small slope. The fact that the slope is as small as it is suggests that ... there is full compensation on a population level when people in the natural setting move from one brand to another.

Dr. Benowitz's 1983 study, which showed this "very shallow slope," has been "replicated [in]numerable times by other scientists," and "those studies show basically the same picture, that there's a very shallow slope between the machine yield and cotinine levels." Burns TT, 2/16/05, 13541:8-13542:14; Benowitz WD, 67:10-18 (discussing his 1983 cross-sectional study); Benowitz TT, 11/1/04, 4564:13-45; Benowitz TT, 11/2/04, 4826:13-4827:5; see also Burns TT, 2/16/05, 13547:7-11 (indicating that the Gori and Lynch compensation study "was presented and examined in [Monograph 13] by Dr. Benowitz and was part of the data that was examined in that chapter that reached the conclusion that compensation was essentially complete").25

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2102. The cross-sectional studies as a whole suggested that compensation is not complete but substantial. Benowitz TT, 11/2/04, 4737:22-4738:9, 4738:15-18; Dixon WD, 44:23-45:18; Mulholland WD, 19:18-20:13.

2103. Evaluating all the types of studies as a whole, the evidence demonstrates, at a minimum, that compensation for daily nicotine is substantial if not complete. Benowitz TT, 11/2/04, 4737:22-4738:9, 4738:15-18 (cross-sectional studies); 4751:1-7 (randomized experiments); 4757:4-8, 4757:19-23, 4766:24-4767:3 (spontaneous brand switching, daily nicotine intake); Wecker WD, 15:19-16:5; Dixon TT, 3/9/05, 14942:5-14943:14; Mulholland WD, 57:12-22; Mulholland TT, 4/25/05, 19943:12-19945:19.

d. The Public Health Community Has Concluded that Low Tar Cigarettes Offer No Clear Health Benefit

2104. Low tar cigarettes have not reduced the risks of smoking relative to fullflavor cigarettes. Burns WD, 1:10-15; 12:10-11; 30:5-12 ("I have concluded that the changes in cigarettes that resulted in a lowering of the FTC tar and nicotine yields over the past 50 years have not resulted in a reduction in the disease risks of smoking cigarettes for the smokers who use these cigarettes."); Burns TT, 2/15/05, 13311:9-15. Dr. Jonathan Samet, a Government expert with extraordinary qualifications, is a physician and epidemiologist with extensive experience treating patients with lung cancer and COPD. He is the

Chair of the Department of Epidemiology at the Johns Hopkins University Bloomberg School of Public Health and has served as author and/or editor of several Surgeon Generals' Reports over more than 25 years, contributed to several National Cancer Institute Tobacco Control Monographs, and served as an author of Chapter 4 of Monograph 13. As an expert in the science of tobacco smoking and health, including epidemiology, pulmonary medicine, and internal medicine, he concluded that the use of lower tar and lower nicotine cigarettes "has had no clear benefit on the health risks of active smoking." Samet WD, 1:3-12, 2:20-3:3, 3:7-11, 3:19-23, 10:15-12:16, 14:1-15:13, 18:12-16, 168:17-19; Samet TT, 9/29/04, 10-18. Similarly, Dr. William Farone, fact and expert witness and former Director of Applied Research at Philip Morris, concluded that, based on his training and experience, "'light' cigarettes—because they generally permit easy compensation and employ levels of dilution that increase the mutagenicity of the tar — are not any less hazardous than their full flavor versions." Farone WD, 123:21-124:4. The Court credits the testimony of these three experts.

2105. The 1981 Surgeon General's Report concluded, referring to the FTC Method of measuring tar and nicotine:

[T]he smoking-machine model is limited in accurately reproducing human smoking behavior.... Smokers, however, are able to take larger, more frequent, and higher velocity puffs than the machines do. It appears that such compensatory adjustments often turn nominally lower 'tar' and nicotine cigarettes into higher tar' and nicotine cigarettes Even if the compensations made in

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smoking a single cigarette are small or nonexistent, smokers can increase their intake of 'tar' and nicotine by smoking more cigarettes.

(no bates) (JD 000636 at 180) (1981 Surgeon General's Report).

2106. The 1981 Report recognized that there are still "smokers who are unwilling or as yet unable to quit." As to them, the Report concluded that they "are well advised to switch to cigarettes yielding less 'tar' and nicotine, provided they do not increase their smoking or change their smoking in other ways." *Id.* at v.

2107. Dr. Burns, an editor of the 1981 Surgeon General's Report as well as "an author, editor or reviewer for each of the annual Reports of the U.S. Surgeon General on the Health Consequences of Smoking since 1975," concluded that, in his expert opinion,

had the information available to the tobacco industry been available to the scientists preparing the 1981 Surgeon General's Report, that Report would not have drawn the erroneous conclusion that lower tar cigarettes produced lower risk or have made the recommendation that smokers who could not quit were "well advised to switch to cigarettes yielding less 'tar' and nicotine."

Burns WD, 1:10-15, 12:10-11, 36:3-37:12, 55:17-56:13, 56:21-57:17; Burns TT, 2/15/05, 13311:9-15; Burns TT, 2/16/05, 13666:25-13667:24 ("Had that information been available to us, we would not have then offered the recommendation to the population of the United States that it would be a good idea to shift to these products."); see also Burns WD, 56:14-20 ("The Surgeon General clearly expressed a concern [in the 1981 Report] about reduced yield smoking leading to compensatory increases in smoking behaviors; but, at that time, the public health community was not aware of the role of nicotine

addiction in altering puffing behavior, the elasticity of delivery designed into cigarettes then on the market which facilitated compensation on the part of the smoker, or the observations made by the industry that showed compensation was essentially complete for some 'light' cigarettes. Had we known that, the recommendation would not have been made."); Burns WD, 3 8:10-13 (indicating that "some of the same concerns [relating to the lack of a health benefit to lower tar cigarettes] were expressed in the 1989 Surgeon General's Report").

2108. The 1981 Report

did not fully take into consideration the phenomenon of compensation, and how smokers smoke to get a certain amount of nicotine, and will even adjust their smoking behavior to get the amount of nicotine they seek or are accustomed to . . . we didn't know in 1981 the extent to which smokers would compensate after switching to a 'low tar' and low nicotine yield product.

Samet WD, 164:15-165:5.

2109. Dr. Burns provided the "three principal reasons" that "the traditional epidemiological approaches that were employed at the time of the 1981 Surgeon General's Report" yielded results erroneously suggesting that lower tar cigarettes provided less lung cancer risk:

(1) "[T]hat people who smoked low-tar and nicotine cigarettes" were smoking them largely "based on the understanding that these cigarettes . . . offered less risk." As a result, the people who choose these cigarettes "have different health behaviors" and often "different smoking characteristics" than smokers of higher tar cigarettes, leading to different expectations of health outcomes.

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(2) That "very few people in the epidemiologic studies started out smoking low tar and nicotine or even filtered cigarettes." Most smokers who smoke the high-tar cigarettes very intensely are not able to switch down to lower tar cigarettes, whereas people who do not smoke the higher tar cigarettes very intensely, "when they switched to a low-tar cigarette ... may be successful because, they didn't have much nicotine intake that they needed to satisfy, and correspondingly they didn't have much tar intake. So the process of switching to low tar and nicotine starts to separate individuals who have different intensities of smoking, different amounts of tar that they are ingesting and, therefore, will have different risks."

(3) That "a substantial fraction of people who switch from high-tar and nicotine cigarettes to low-tar and nicotine cigarettes use increased numbers of cigarettes ... as a mechanism of compensation In order to control for intensity of smoking, the epidemiologic studies used the number of cigarettes smoked per day as a measure of intensity with the mistaken assumption that people wouldn't change the number of cigarettes they smoked per day. That leads us to underestimate the actual number of cigarettes smoked per day as a measure of exposure in low-tar and nicotine cigarette smokers," because the epidemiological analysis compares people who smoke a higher number of cigarettes per day after switching to a lower tar cigarette to people who smoked this higher number of cigarettes per day of the higher tar cigarette. "That produces an erroneous, or incorrect, perception that switching to [the lower tar] cigarette lowered your lung cancer risk as an individual."

Burns TT, 2/15/05, 13327:21-13331:3; 13334:6-13337:5.

2110. Moreover, epidemiological studies may underestimate the risks for lower tar smokers because these smokers may have other characteristics — such as healthier lifestyles — that contribute to a reduction in risk regardless of the type of cigarette smoked:

Epidemiological studies often assume that smokers who switch to low-yield products are similar to smokers who do not. There is evidence that this may not be true. For example, switchers may smoke their cigarettes differently, they may have started smoking later as teenagers, they may attempt to quit more often. Switchers may have smoked less intensely before they switched, when compared to their high-yield, nonswitching counterparts. Switchers may have smoked less at younger ages. When these aspects of smoking behavior are not accounted for, study results may be misleading. In addition, switchers are [a] generally healthier group in terms of diet, exercise, and lifestyle in comparison to smokers who do not switch to a low yield product. The cumulative effect of these group differences is that any reduction in the risks among switchers may be the result of these differences, rather than the fact that they switched to a low yield product. This was also an observation in Monograph 13.

Samet WD, 167:13-168:2.

2111. Recent studies, including the National Cancer Institute's Monograph 13 and the 2004 Surgeon General's Report, have confirmed that low tar and filtered cigarettes are no less harmful than conventional delivery and unfiltered cigarettes. The 2001 NCI Monograph 13, "Risks Associated With Smoking Cigarettes With

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Low Machine Measured Yields of Tar and Nicotine" ("Monograph 13") concluded:

Epidemiological and other scientific evidence, including patterns of mortality from smoking-caused diseases, does not indicate a benefit to the public health from changes in cigarette design and manufacturing over the last fifty years Widespread adoption of lower yield cigarettes in the United States has not prevented the sustained increase in lung cancer among older smokers . . . Considering the overall exposure data for individuals selecting their own brands, there is little reason to expect that smokers of low yield cigarettes will have a lower risk of disease than those who smoked higher yield cigarettes.

DXA0310399-0650 at 0422-0423, 0473 (U.S. 58700).

2112. Dr. Samet testified that: "The evidence is clear. We have tracked the risk of lung cancer closely and not seen a fall in relative risks to smokers." Samet WD, 169:14-16.

2113. The 2004 Surgeon General's Report reached the definitive conclusion: "[C]igarettes with lower machine-measured yields of tar and nicotine (i.e., lowtar/nicotine cigarettes) have not produced a lower risk of smoking-related diseases." In addition, the Report concluded that "[s]moking cigarettes with lower machine-measured yields of tar and nicotine provides no clear benefit to health" and that, "[a]lthough characteristics of cigarettes have changed during the last 50 years and yields of tar and nicotine have declined substantially, as assessed by the Federal Trade Commission's test protocol, the risk of lung cancer in smokers has not declined." TL0930001-0949 at 0042, 0340, 0911 (U.S. 88621). See also VXA100001-0604 (U.S. 77217) (NCI Monograph 8); MTP0032477-2481 (U.S. 76212) (11/7/97 CDC

MMWR article); VXA1611681-1689 (U.S. 77222) (1996 Samet et al. article); VXA1601456-1742 (U.S. 64059) (1984 Surgeon General's Report).

2114. Both the 2004 Surgeon General's Report and the NCI's Monograph 13 were based on evidence "derived from research on human behavior and exposures, cigarette design and yields, smoke chemistry, epidemiological [and other] population-based data on human disease risk." DXA0310399-0650 at 0422-0423 (U.S. 58700).

2115. Extensive research into the relationship between research of biomarkers of nicotine in humans and FTC tar and nicotine yields demonstrates that lower tar cigarettes do not provide a reduction in harm:

Generally speaking, research using these biomarkers has indicated little, if any, correlation between the FTC-yield of tar or nicotine, and the levels of the biomarkers measured in smokers . . . These results suggest that there is little difference in the levels of biomarkers comparing smokers of higher yield tar/nicotine cigarettes and lower yield tar/nicotine cigarettes, as measured by the FTC method. This implies that doses of carcinogens or other toxic materials that smokers ingest have little relationship, if any, to the FTC tar yield. This, in turn, suggests that the gradual reduction in tar yield over the past several decades has not resulted in a reduction in smokers' exposure to carcinogens, and that the FTC test method is not informative with respect to lung cancer risk or to the risk of smoking-caused diseases generally In fact, evidence with respect to smoker compensation and biomarkers shows that those smokers who switch to "Low Tar" cigarettes modify their pattern of smoking to obtain the same or similar amounts of tar and nicotine as from the "High Tar"

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cigarettes they used to smoke. The bottom line is that a "Low Tar" label-based brand under the FTC protocol does not mean that a smoker is actually ingesting "Lower Tar" than from any other cigarette.

Samet WD, 147:11-148:21; 149:23-150:4.

2116. The conclusions of Monograph 13 and the 2004 Surgeon General's Report—that lower tar cigarettes do not provide a health benefit—"represent[] the consensus view of the scientific community on this issue." Burns WD, 1:10-15; 31:6-9; 41:12-18; 58:20-61:13 (discussing Monograph 13 (U.S. 58700); IOM Report (U.S. 20919); WHO Sactob Report (U.S. 86658); and 2004 Surgeon General's Report (U.S. 88621)); Burns TT, 2/15/05, 13311:9-15; 13668:1-8; see also Benowitz WD, 72:21-24 ("Most authorities are now convinced that there is little if any benefit with respect to health risk to smoking low yield versus regular cigarettes"); (no bates) (U.S. 86657) (Canadian Expert Panel, Putting an End to Deception: Proceedings of the International Expert Panel on Cigarette Descriptors. A report to the Canadian Minister of Health from the Ministerial Advisory Council on Tobacco Control 9) (2001) ("There is no convincing evidence of a meaningful health benefit to either individuals nor to the whole population resulting from cigarettes marketed as 'light' or mild").

2117. In 2001, the Institute of Medicine published "Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction," which concluded that "the public health of PREPs [potential reduced-exposure products] is unknown." The IOM report went on:

The major concern for public health is that tobacco users who might otherwise quit will use PREPs instead, or others may initiate smoking, feeling that PREPs are safe. That will lead to less harm reduction for a population (as well as less risk reduction for that individual) than would occur without the PREP, and possibly to an adverse effect on the population.

(U.S. 20919).

2118. In 2001, the World Health Organization Scientific Advisory Committee on Tobacco Product Regulation issued a report that concluded:

1. Tar, nicotine, and CO numerical ratings based upon current FTC methods and presented on cigarette packages and in advertising ... are misleading and should not be displayed ... 4. Banned terms should include light, ultra-light, mild and low-tar, and may be extended to other misleading terms. The ban should include not only misleading terms and claims but also, names, trademarks, imagery and other means of conveying the impression that the product provides a health benefit.

TLT1010692-0699, 0695 (U.S. 86658).

2119. In 2004, the World Health Organization International Agency for Research on Cancer ("IARC") released its Monograph 83, "Tobacco Smoke and Involuntary Smoking," which concluded that "changes in cigarettes since the 1950s have probably tended to reduce the risk for lung cancer associated with the smoking of particular numbers of cigarettes at particular ages." However, the IARC Monograph attributed any reduced risk largely to the shift from unfiltered to filtered cigarettes which occurred in the 1950s, not the shift from high yield to low yield cigarettes which occurred in the last few decades. Moreover, the IARC's conclusion did not apply to individuals who increased the number of cigarettes they consumed as they shifted to low yield cigarettes. 1000861953-1953 (U.S. 35484) (Wakeham 3/24/61) ("As we know, all too often the

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smoker who switches to a hi-fi cigarette winds up smoking more units in order to provide himself with the delivery which he had before."). The IARC Monograph went on: "the introduction of cigarettes that can be misperceived as 'safe' may well have adversely affected smoking uptake rates, cessation rates, and consumption per smoker." TLT0970001-1455, 0180 (U.S. 86746)

2120. All the major scientific bodies that have addressed this question in recent years have clearly concluded that lower tar cigarettes provide "no clear benefit" to health:

I think there's no evidence of clear benefit . . . I think the state of the evidence has been well summarized in the reports of the Surgeon General, IARC, the Institute of Medicine, each group that's looked at the question of whether today's lower yield cigarettes are likely to produce—are likely to produce lower risk of lung cancer, has said, you know, no clear benefit.

Samet TT, 11/29/04, 1168:12-16; 1169:2-18.

2121. Echoing the conclusions of Monograph 13 and the 2004 Surgeon General's Report, a January 2004 article in the British Medical Journal reported on a study intended "to assess the risk of lung cancer in smokers of medium tar filter cigarettes compared with smokers of low tar and very low tar cigarettes":

There was no difference in risk among men who smoked brands rated as very low tar ... or low tar ... compared with those who smoked medium tar brands. The same was seen for women.... Men and women who smoked very low tar ... and low tar ... brands had risks of lung cancer indistinguishable from those who smoked medium tar ... brands.... Our finding that there was no difference in the risk of lung cancer between people who smoked medium tar filter, low tar filter, and very low tar filter cigarettes is consistent with evidence of compensatory smoking.

TLT1020160-0167 at 0160, 0164, 0166 (U.S. 88622).

2122. Two very large American Cancer Society's Cancer Prevention Studies ("CPS"), "conducted approximately 20 years apart," which show that lung cancer death rates have not gone down as a result of the introduction of low-tar cigarettes, provide powerful confirmatory evidence. CPS-I was conducted in the late 1950s and early 1960s, and CPS-II was conducted in the 1980s. Because of this 20 year gap, the smokers in the CPS-I study were smoking mostly high-tar, unfiltered cigarettes, and the "vast majority" of the smokers in the CPS-II study were smoking filtered cigarettes with much lower machine-measured tar and nicotine yields. CPS-I and CPS-II are "the two largest studies of smoking and disease risks;" they included "over a million men and women each," and "followed those individuals for" 12 to 18 years. The results of these studies showed that, "[d]espite the substantive reduction in tar yield of the cigarettes smoked in CPS-II, lung cancer disease risks increased rather than decreased in comparison to CPS-I." Burns WD, 1:10-15, 12:10-11, 33:18-34:6, 35:14-35:9; Burns TT, 2/15/05, 13311:9-15, 13313:9-13314:6, 13316:19-13317:15, 13322:9-10.

2123. Despite the dramatic shift to filtered and "light" cigarettes in the last 50 years, the effect the public health community was expecting to see from a change in the type of cigarettes smoked in the U.S never materialized. To the contrary, health risks increased significantly. With reference to the CPS-I and CPS-II studies, Dr. Burns explained:

For males, when you look at the risk of smoking, you see that it just about doubled

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between CPS-I and CPS-II.... For females, it went up almost fourfold.... [E]ven after adjustment for differences in number of cigarettes smoked and the duration of smoking, the rates increased for males and increased for females between these two studies that were conducted over a period of time when there was approximately a 50 to 60 percent decline in the tar value of the cigarettes being smoked and a dramatic increase in the number of smokers who were smoking filtered cigarettes. So, instead of seeing a reduction in the risk of smoking with the introduction of these products, we have seen the risk of smoking actually increase over that interval we had watched and waited for the decline in lung cancer to occur. It did not.

Burns TT, 2/15/05, 13322:22-13323:22, 13325:6-13326:22; (no bates) (U.S.17802) (depicting the "sales-weighted tar and nicotine values for U.S. cigarettes" over time); (no bates) (U.S.17803) (depicting data from the CPS-I study); (no bates) U.S. 17804 (comparison of lung cancer risk for nonsmokers and smokers based on CPS-I and CPS-II data); (no bates) (U.S. 17806) (graph showing that risk of lung cancer from smoking has not declined, notwithstanding the drastic shift to filtered cigarettes and those with lower machine-measured tar and nicotine deliveries).

2124. As Dr. Samet explained, "[i]f there were substantial benefits of the change in tar yield over the 20 years between [CPS-I in the 1960s and CPS-II in the 1980s], we would expect lower relative risks; instead they increased." Dr. Samet also explained that the British Physician's study, which was conducted over two 20-year periods, also "shows that the relative risk values [for lung cancer] have gone up comparing the first 20 years (1951-1971) to the second 20 years (1972-1991)." Samet WD, 154:21-156:4, 156:5-12, 157:20-158:15; VXA1601833-1843 (U.S. 64058) (published article on British Physician's Study, cited in Samet Written Direct).

2125. Even if it were true that lower tar cigarettes result in some minor incremental reduction in tar, they do not provide any meaningful health benefit relative to higher tar cigarettes "from the perspective of human exposure ... or meaningful exposure." Henningfield TT, 11/3/04, 7295:2-7298:2. As Dr. Henningfield explained:

It would be a little bit like low fat cheese has 100 grams, lets say, of X, and then there is another type that gave you 98 grams, and you could say, yes, that's lower, and the next lower one is 97 grams, but that's a meaningless difference, even though it's accurate and reliable by a machine test and you can say it does go down, it's a meaningless difference In this case, what Benowitz['s] study, and then many other studies showed, is that if you looked at actual intake of people, there was virtually no difference at all in intake. And it wasn't just that the ranking was off a little bit, it was that, for example, the Marlboro Light, according to the Massachusetts data can get — give you about three times as much nicotine as it was rated, and more than twice as much as the Marlboro regular, so it's off by several orders of magnitude, but most importantly, it is just—if [a] consumer says, okay, I want to get lower tar and nicotine and they pick a light versus a regular, they're not getting biologically meaningful lower tar and nicotine . . . There is no meaningful difference in exposure to people what U.K. realizes now, what U.S. realizes, the World Health Organization realizes is that it is still a meaningless difference. And that's why ... the resistance to even using the . . . label "light" cigarettes.

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Id.; see also Henningfield TT, 12/1/04, 7535:12-7536:23 (explaining that the "light cigarette debacle" centers around the fact that the historical reduction in machine-measured tar "was biologically meaningless," citing NCI Monograph 13).

2126. Dr. Samet echoed these conclusions, stating that "while some earlier studies suggested a modest benefit in terms of lung cancer risk, late, more recent evidence suggests otherwise, namely that there is no benefit." He pointed out that, even excluding the more recent evidence and postulating some reduction in risk, the "overall risk [of smoking these cigarettes] is so high that even a small reduction is of no public health or medical significance." Samet WD, 170:11-23.

2127. Notwithstanding the widespread acceptance and independent validation in the scientific community of Monograph 13 and its conclusions, Defendants tried to challenge its conclusions and methodology, including the selection of its contributors. Defendants criticized the authors of Monograph 13 for not acknowledging the few scientists who expressed skepticism about its results. In addition, Defendants challenged NCI's selection of contributors to the Monograph, namely, that the scientists chosen were biased in favor of concluding that low tar cigarettes yield no clear benefit. However, as Dr. Burns noted, many of the contributors to Monograph 13 "represent some of the more distinguished scientists and experts on this issue in the country" and:

[T]he consensus statement of the organization, that is the NCI . . . prevents individual opinion from being presented as the consensus of scientific thought . . . The way that you know that [collective biases are not influencing the final document] is by taking it through a series of reviews by the governmental organization The organization that then produces the volume and puts its seal of consensus approval on it, that is the National Cancer Institute, that undergoes a series of reviews that it takes to ensure that the data contained in the volume are scientifically accurate and represent the consensus of scientific thought.

Burns TT, 2/15/05, 13383:1-13389:4.

2128. Defendants' scientists were not involved with the production of Monograph 13 because:

At the time which this was undertaken, the tobacco industry's position was still that . . . there were no disease risks that were causally associated with cigarette smoking . . . For that reason, the tobacco industry has not been included in the Surgeon General's Report process and various other processes because they weren't part of the consensus of scientific thought at that point in time. They were perceived as adopting positions that had so little scientific credibility that they could not be meaningfully utilized in the formation of a consensus.

Burns TT, 2/15/05, 13389:11-13391:21 (explaining also that Monograph 7, in which RJR scientists participated, "was not a consensus document, it was simply the results of the proceedings of a meeting. Those proceedings come out under the author's name, are understood to be the individual opinions of the authors. That was not what was being requested with Monograph 13").

2129. The Court finds that the testimony of Dr. Burns is totally credible and persuasive on each of the issues which he discussed, including low tar cigarettes and their relative health effects. Dr. Burns, qualified by the Court without objection as an expert in "[t]he science of tobacco and health, including disease causation," is a medical doctor and professor of family and preventive medicine with 30 years' experience

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studying the health consequences of smoking. Dr. Burns has extensive experience, including as a teacher, in various medical areas, including smoking and health, and has studied epidemiology, addiction, nicotine, cigarette design and ETS in the context of smoking and health. He has over 200 publications, most of which are peer-reviewed, in the area of smoking and health, including chapters in two of the leading medical textbooks. Furthermore, Dr. Burns has studied and taught extensively in the area of lung diseases, including lung cancer, and has personally participated in the treatment of thousands of patients with lung disease. In addition, he has served as "an author, editor or reviewer for each of the annual Reports of the U.S. Surgeon General on the Health Consequences of Smoking since 1975," and has served as contributing author and Senior Scientific Editor for several of the National Cancer Institute Tobacco Control Monographs. Dr. Burns has also received numerous award and honors for his work in the area of smoking and health, including the Surgeon General's Medallion. Finally, Dr. Burns's demeanor during his testimony, which spanned nearly two full days and consisted mostly of cross-examination, further demonstrated his credibility. He fully answered the questions posed to him by well-prepared counsel, he was totally versed in the complex scientific areas about which he was questioned, he was neither evasive nor combative, and demonstrated an enormous familiarity with the

science of smoking and lung cancer, the history of the issue in this country as scientists learned more and more about the subject, and the manner in which preparation of the Surgeon General's Reports represented the most up-to-date scientific consensus on the topic being studied. Burns WD, 1:3-5; 1:10-15; 12:10-11; (no bates) (U.S. 78526).

2130. For the reasons set forth at length in previous Sections, the Court also finds that the testimony of Drs. Samet, Henningfield, Benowitz, and Farone is also highly credible and persuasive.

2131. To rebut the compelling testimony of Drs. Burns, Samet, Henningfield, Benowitz, and Farone, Defendants called a statistician, William Wecker, who, by his own admission, has "never been qualified by a Court as an expert in the subject of smoking and health."²⁶ Wecker TT,

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3/15/05, 15650:5-7. Because he is a statistician, and neither an epidemiologist nor a medical doctor, Dr. Wecker is "not able to offer opinions as to causation" relating to the relative health effects of low tar cigarettes. Wecker TT, 3/15/05, 15666:6-15667:2, 15670:20-15671:8. Moreover, Dr. Wecker's statistical analyses are unconvincing because they are flawed in several ways.

2132. First, Dr. Wecker's core opinion—that smokers who switch to lower delivery cigarettes do not increase the number of cigarettes per day that they smoke—is flatly contradicted by Defendants' voluminous research reports and other documents, spanning decades, which demonstrate that smokers who switch to lower deliveries do smoke more cigarettes per day. 1000861953-1953 (U.S. 35484) (1961 PM); 2022244449-4450 at 4449-4450 (U.S. 36855) (1970 PM); 1000350158-0188 at 0161-0162 (U.S. 20176) (1971 PM); 1003285403-5416 at 5403 (U.S. 20159) (1972 PM); 1003285403-5416 at 5403 (U.S. 20159) (same); 1003293476-3493 at 3480 (U.S. 85073) (1974 PM); 2040066740-6766 at 6750-6751, 6754-6755 (U.S. 20435) (1979 PM); 2071376833-6834 at 6833 (U.S. 27273) (1992 PM); 501525355-5366 at 5360-5361 (U.S. 29531) (1974-1976 RJR); 679009843-9867 at 9843 (U.S. 85055) (1977 B & W); 775036039-6067 at 6050 (U.S. 21053) (same); 536000000-0090 at 0050 (U.S. 22338) (1984 B & W); 760008596-8803 at 8760 (U.S. 54588) (Confidential) (1998 BAT); 00044522-4523 at 4522 (U.S. 22012) (1976 Lorillard).

2133. Second, Dr. Wecker testified that, in forming his opinion on this issue: "I don't reach my opinion by weighing all the evidence, but mainly on my own statistical work replicating and correcting figure 4-5" of NCI Monograph 13. Wecker TT, 3/15/05, 15656:22-15657:14. Figure 4-5 illustrates one of the new statistical analyses of CPS-I data that were performed as part of the production of NCI Monograph 13 relating to change in number of cigarettes smoked per day by smokers switching down to obtain lower tar yield. However, the Conclusions of Chapter 4 of Monograph 13 did not rely on the new analyses. Burns WD, 30:13-18, 58:4-19; Burns TT, 2/16/05, 13498:1-9; DXA0310399-0650 at 0509-0510 (U.S. 58700).

2134. Dr. Burns explained that the issue of "increases in number of cigarettes per day smoked by those who switch to lower tar brands of cigarettes" is "not the only [reason and], for that matter, it's not the princip[al] one" for Monograph 13's conclusion that lower tar cigarettes provide no reduction in harm relative to higher tar cigarettes.

2135. The first sentence in the Monograph under the heading for these new analyses of CPS-I data clearly states that the new analyses of cigarettes per day were inconclusive and, as such, were not the basis for Monograph 13's conclusions:

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A reexamination of the CPS-I data set was inconclusive as to whether compensatory changes in the number of cigarettes smoked per day when smokers switched to a lower nicotine cigarette introduce a bias sufficient to explain the observed increased lung cancer risk among smokers of high yield cigarettes.

DXA0310399-0650 at 0509 (U.S. 58700); Wecker TT, 3/15/05, 15683:5-15687:14. Consequently, Dr. Wecker's testimony, which relied on his critique of the new CPS-I analyses, was basically irrelevant since Monograph 13 did not rely on that data in reaching its conclusion.

2136. Third, Dr. Wecker's analysis failed to refute, or even consider, the conclusions reached by several other prominent scientific bodies—including the 2004 Surgeon General's Report, the 2002 publication of the Scientific Advisory Committee on Tobacco Regulation to the World Health Organization, and the 2001 report to the Canadian Minister of Health from the Ministerial Advisory Counsel on Tobacco Control in Canada—which all reached the same conclusion as did the NCI in Monograph 13, namely that lower tar cigarettes provide no significant reduction in lung cancer or other health benefit—in direct contrast to Dr. Wecker's conclusions. Wecker TT, 3/15/05, 15661:11-15664:23. Since Dr. Wecker was only a statistician and not qualified to address the subject of smoking and health, he could not have addressed the substance of NCI's scientific conclusions in Monograph 13.

2137. Fourth, Dr. Wecker made several changes to the analyses in Monograph 13 that reflected his lack of understanding of the relevant subject matter. For instance, he included women in his analysis of Figure 4-5 and was unaware that the contributors to Monograph 13 excluded women because the later increase in smoking prevalence among women resulted in the lack of a valid baseline dose-response relationship. Wecker TT, 3/15/05, 15691:18-15695:11; Burns TT, 2/15/05, 13323:23-13325:4 (explaining the temporal differences in the rise of prevalence of male and female smoking, which led to exclusion of women in graph); 13342:8-20 (explaining the gender differences in prevalence in the United States and France).

2138. Fifth, Dr. Wecker acknowledged that many of his reanalyses of Figure 4-5 showed no statistically significant difference in risk for smokers at the various tar levels, which is entirely consistent with the conclusion of the authors of Monograph 13, quoted above, that the results on this issue were "inconclusive." Burns TT, 2/16/05, 13526:4-6; Wecker TT, 3/15/05, 15687:15-15691:17.

2139. Sixth, Dr. Burns explained that studies done by Garfinkel et al. reported in the 1980 Banbury Product Liability and Health Risks report, which Dr. Wecker claimed were "consistent with [his] conclusions," were not "consistent with Dr. Wecker's findings . . . because it's a different analysis." Dr. Burns also noted: "We cited both of the [Garfinkel] studies that examined cigarettes per day in Monograph 13. We looked at them carefully." Burns TT, 2/16/05, 13517:11-13518:23; Wecker WD, 31:10-14.

2140. Dr. Samet explained that comparing Dr. Garfinkel's calculations, published more than 20 years ago, to those performed for Monograph 13, is a case of comparing apples to oranges, as the analyses sought to answer markedly different questions:

They're very different . . . Dr. Garfinkel said: If people changed their brand, did they smoke more, the same or less? Just those three bins [categories], if you will. What [the Monograph 13] analysis says is: Let's look at whether there's a relationship between the reported numbers

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of cigarettes smoked on the first brand and on the second brand and the difference in nicotine yield on the first brand and the second brand. So [the Monograph 13 analysis] is a more quantitative analysis and Dr. Garfinkel's was more sort of: Did people change from smoking more than they used to [or] to less than they used to?

Samet TT, 9/29/04, 1185:11-1186:19; 1191:12-16; 1193:8-1195:11.

2141. Dr. Wecker maintained that examining lower tar and higher tar smokers' lung cancer rates, without controlling for cigarettes per day, provides "other empirical support" for his claim that epidemiological studies of the relative health effects of low tar cigarettes are not biased by controlling for cigarettes per day. Wecker WD, 49:5-11. However, Dr. Burns explained that neglecting to control for cigarettes per day fails to resolve "the core issue" necessary to have a reliable analysis, because it "introduce[s] other biases that are equally important":

The core issue is having comparable groups, that is, having groups [where] you can adjust for those characteristics other than the type of cigarettes that they smoke. If you include numbers of cigarettes for controlling, you over control. If you don't, then you're left with the two populations likely to have differences in intensity of smoking and no method by which you can control for that difference. Then you can't tell whether the difference you're seeing is due to a difference in intensity of smoking, i.e. completely independent of the type of cigarette or is a characteristic of the cigarette that you've chosen to smoke.

Burns TT, 2/16/05, 13661:14-13662:6; see also Burns TT, 2/16/05, 13484:18-13485:10; 13486:8-21 ("If you don't control for cigarettes per day, you have two different groups of individuals who have different intensities of smoking and, therefore, you can't compare their exposures without looking at intensity.").

2142. Finally, Dr. Wecker's analysis of actual versus predicted death rates was not done in the manner utilized in Monograph 13. He admitted on cross-examination that there were several discrepancies between his analysis and that described in Monograph 13. The discrepancies included the fact that Dr. Wecker used mortality data, taken from the National Health Interview Survey, from 1993 to 2000, that was not contained in the calculations in Monograph 13. Again, Dr. Wecker was unaware of a critical fact, namely that the contributors to Monograph 13 specifically excluded data after 1992 because the National Health Interview Survey "changed the definition of smoker in 1992," making the post-1992 data inconsistent with the pre-1992 data. Wecker WD, 51:3-21; Wecker TT, 3/15/05, 15698:14-15701:18.

2143. Dr. Wecker also acknowledged that, while Monograph 13 discussed a chart examining lung cancer death rates at ages under 50, he attempted to create the chart described in the Monograph but only included people aged 40-50, excluding death rates for all ages under 40. Wecker TT, 3/15/05, 15702:5-15706:2.

2144. Dr. Burns testified, upon review of a chart based on Dr. Wecker's calculations of actual versus predicted death rates, purportedly based on Monograph 13: "The data presented in this graph have essentially no meaning whatsoever. This is not the analysis that Sir Richard Doll was suggesting be done and it is not an analysis that has any valid, scientific or technical meaning." Burns TT, 2/16/05, 13666:20-23; see also Burns TT, 2/16/05, 13664:10-24 (testifying that, to his knowledge, the chart has never "appeared in published peer reviewed literature").

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2145. In sum, there is an overwhelming consensus in the public health and scientific community, both here and abroad, that low tar cigarettes offer no clear health benefit to smokers, have not reduced the risk of lung cancer and heart disease for smokers using them, and have not produced any decrease in the incidence of lung cancer. Moreover, because of the misleading nature of the advertising for low tar cigarettes, smokers who might have quit have refrained from doing so in the belief that such cigarettes reduced their health risks.

2. Based on Their Sophisticated Understanding of Compensation, Defendants Internally Recognized that Low Tar/Light Cigarettes Offer No Clear Health Benefit²⁷

a. Defendants Internally Recognized that Low Tar Cigarettes Are Not Less Harmful Than Full-Flavor Cigarettes

(1) Philip Morris

2146. A March 1, 1977 Philip Morris memorandum by industry-funded scientist Stanley Schachter to Thomas Osden, Director of Research, concluded that low tar/ low nicotine cigarettes are not less harmful:

[I]t would certainly seem that the campaign for low nicotine cigarettes is misguided and rests on a set of fallacious premises.... The question is crucial and particularly so in light of ... Ross's evidence that carbon monoxide, hydrogen cyanide, and nitrogen oxide delivery is considerably greater in most of the popular brands of low nicotine filter, [sic] cigarettes than in high nicotine, non-filter cigarettes.... It is ... clear ... that the major body of data that has been used to justify the campaign for low nicotine cigarettes does nothing of the sort.

1000046626-6661 at 6655, 6660 (U.S. 20074).

2147. Dr. Farone stated that Philip Morris's Marlboro full-flavor and Marlboro Lights cigarettes are "essentially identical except for dilution"—i.e., that Marlboro Lights have more dilution, dilution referring to ventilation that dilutes the smoke, particularly when machine-smoked by the FTC method, with ambient air. "[A]s you increase dilution, the toxicity in [the Ames] test increases, which is more likely than not associated with a toxicity increase in smokers." Farone TT, 10/7/04, 1888:2-1889:5; 1891:17-19.

2148. In fact, Dr. Farone explained that the very Ames mutagenicity testing that Philip Morris has conducted for the past 25 years, and that "Philip Morris has concluded ... predicts carcinogenicity" has indicated that Philip Morris's Marlboro Lights cigarettes are, as designed, more mutagenic than Marlboro full-flavor cigarettes:

[I]n the case of Marlboro Lights, the Philip Morris test data that I have reviewed on that level of dilution for equivalent blends indicated that the product design for their Light cigarettes was more mutagenic than the full flavor Marlboro, Marlboro Reds, and therefore predictive of more potential cancer risk. These studies were repeated multiple times over the past 20 years and continue to be repeated to this day. The Philip Morris data, as was used by Philip Morris, was a strong warning that their product design change between a Marlboro Red and a Marlboro Light—

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increased ventilation—resulted in a potentially more dangerous product.

Farone WD, 119:7-120:15; Farone TT, 10/7/04, 1866:2-17. Philip Morris has not "changed the design of 'Light' cigarettes in response to its studies and knowledge concerning mutagenicity." Farone WD, 121:3-9.

2149. Philip Morris consultant and former employee Dr. Whidby agreed with Dr. Farone's basic analysis and acknowledged that "increased filter dilution," one of the techniques Philip Morris uses to lower the FTC tar yield of its cigarettes, "is associated with increased biological activity." Dr. Whidby explained that biological activity in the context of Philip Morris's biochemical testing reports generally refers to biological reactions such as tumor growth, cell mutations, and toxic reactions, and that it was "a bad thing" that should be reduced. Whidby TT, 2/22/05, 13964:18-25; 13967:22-13968:19. Helmut Wakeham, of Philip Morris, acknowledged the same phenomenon as far back as March 1, 1974. 1003293476-3493 at 3492 (U.S. 85073).

2150. A November 1977 Philip Morris memorandum to Dr. Robert Pages from J. Booker and S. Drew about Ames testing stated: "The take home lesson from this experiment is that dilution of a cigarette appears to increase the activity of the WSC [whole smoke condensate] (more dramatically for some cigarettes than for others)." 1002978361-8363 at 8362 (U.S. 35635).

2151. By 1978, Philip Morris had substantial evidence that "filter dilution [which Philip Morris used to reduce FTC tar and nicotine yields] was somehow acting to increase" the "activity" of the whole smoke condensate ("WSC") collected from its cigarettes. Further experiments confirmed that the tar from ventilated low tar reference cigarettes, i.e., cigarettes used for research purposes and not actually sold in stores, measured higher on mutagenicity tests than non-ventilated products. Additional research conducted in 1979 yielded the same result. 2001243600-3673 at 3610-11 (U.S. 20298); accord 2022180219 (U.S. 21479).

2152. A May 11, 1982 Philip Morris document from INBIFO (Philip Morris's overseas research facility in Switzerland) revealed that Philip Morris learned from its testing of low tar reference laboratory cigarettes in Europe that these cigarettes registered higher in standard biological tests than the full-flavor delivery reference cigarettes—i.e., were "more active"—and thus were more likely to cause cancer: "Low tar reference cigarette ... [m]ay be slightly more active than [the regular delivery reference cigarette] as a complete carcinogen." 1003121638-1643 at 1638 (U.S. 20153).

2153. A January 28, 1994 report from INBIFO to Philip Morris in Richmond, Virginia stated that increased cigarette filtration, porosity, and ventilation (primary methods used by Philip Morris to reduce the FTC Method tar and nicotine yields in its cigarettes) would result in an increase in the degree to which cigarette smoke was toxic to living cells (i.e., cytotoxicity), the irritation it caused to smokers, and

the likelihood that the smoke would generate mutations such as tumors and/or cancer (i.e., mutagenicity). The document stated: "Increased filtration will result in a relative enrichment of gas phase constituents, leading to increased cytotoxicity and irritancy . . . Increased porosity and ventilation will ... increase the specific mutagenicity." 2024005509-5512 at 5509-5510 (U.S. 20399); Farone WD, 122:1-14 (citing to, and agreeing with, INBIFO conclusions).

2154. In this case, A. Clifton Lilly, Senior Vice President of Technology, confirmed that data from tests run at Philip Morris's INBIFO facility showed that the

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Ames test for mutagenicity from Marlboro Lights produces significantly higher results than the tar from Marlboro full flavor products. 2001243600-3673 at 3610-11 (U.S. 20298); 2022180219-0219 (U.S. 21479); 1000135419-5439 (U.S. 20078); Lilly PD, United States v. Philip Morris, 5/14/02, 229:17-231:21.

2155. A 2001 document about Ames mutagenicity testing from Philip Morris's INBIFO laboratory in Germany demonstrated that, in every case, the mutagenicity of Marlboro Lights is higher than the mutagenicity of Marlboro full-flavor. 2505913831-3836 (U.S. 46079).

2156. James Morgan, former President and CEO of Philip Morris, conceded in 2002 that, in his opinion, lower tar cigarettes are not any safer than higher tar cigarettes. Morgan PD, Price v. Philip Morris, Inc., 6/5/02, 75:3-15.

2157. According to Nancy Brennan-Lund, Philip Morris Senior Vice President of Marketing, "what we say on our web site we believe to be true." Philip Morris's position is that low tar cigarettes are no less harmful than full-flavor cigarettes, "based on what the Monograph 13 came out with." Lund later qualified her statement: it has "not been proven" that light cigarettes are less harmful, so one cannot assume they are less harmful. Brennan-Lund PD, Price v. Philip Morris, Inc., 9/20/02, 107:22-108:14; 109:16-110:22; 114:9-114:10.

2158. Ellen Merlo, then Philip Morris USA Senior Vice President of Corporate Affairs, agreed that in 2002 that Philip Morris's policy at the time was that lights or low tar cigarettes are not safe or safer than any other cigarettes. Merlo PD, Price v. Philip Morris, Inc., 10/2/02, 80:3-80:15.

(2) R.I. Reynolds

2159. RJR's internal documents show that it, like the other Defendants, has long known that it has evidence that low tar cigarettes are no safer than regular cigarettes.

2160. In May 1980, RJR scientist C.T. Mansfield performed the Ames test for mutagenicity "on the tars from twenty-four domestic brands of cigarettes with various [FTC] `tar' deliveries," and found "a trend for low `tar' cigarettes to show higher numbers per mg [of] `tar,'" indicating that the low "tar" cigarettes caused more mutations. 514903578-3610 at 3579 (U.S. 20863).

2161. A September 29, 1992 RJR internal presentation reported that lower tar cigarettes were more likely to cause mutations such as tumors and cancer than higher tar cigarettes. The presentation stated: "Higher tar cigarettes tend to have lower Ames activity . . . than lower tar cigarettes." 509643825-3832 at 3825 (U.S. 20830).

2162. In 2003, Arnold Mosberg, an RJR scientist, and other RJR scientists (Doolittle and Morgan) reviewed "data [they] have had for decades" (some for more than two decades) to conduct a comparison of the relative harmfulness of lights and full flavor cigarettes, using various tests, including animal skin painting tumorigenicity, rodent inhalation, and Ames mutagenicity studies. The results of these studies indicated that low tar cigarettes do not reduce risk relative to full-flavor cigarettes. Mosberg PD, Turner v. R.J. Reynolds, 8/19/03, 2:12-16, 6:7-12:4, 14:21-15:19, 15:24-16:1, 16:13-24, 19:3-5, 21:20-22:10, 22:19-26:8, 55:1-11, 57:15-58:16, 97:15-100:12, 103:23-104:1 (discussing in part Deposition Exhibit 2).

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(3) Brown & Williamson

2163. A February 4, 1976 memorandum from Ernest Pepples, B & W Senior Vice President, titled "Industry Response to Cigarette/Health Controversy," reveals Defendants' knowledge that the low tar and filter cigarettes they were marketing as less harmful were not producing less tar and less nicotine to the smoker and were not likely to actually be less harmful:

The industry has moved strongly toward filtered cigarettes, which have increased from 0.6% in 1950 to 87% in 1975..... This became known as the tar derby' of the late 1950's. It was characterized by sharply intensified advertising competition The new filter brands vying for a piece of the growing filter market made extraordinary claims It was important to have the most filter traps. Some claimed to possess the least tars. In most cases, however, the smoker of a filter cigarette was getting as much or more nicotine and tar as he would have gotten from a regular cigarette. He had abandoned the regular cigarette, however, on the ground of reduced risk to health The manufacturers' marketing strategy has been to overcome and even to make marketing use of the smoking/health connection Thus the tar derby' in the United States resulted from industry efforts to cater to the public's concern and to attract consumers to the new filtered brands The current duel between True and Vantage and between Carlton and Now are other examples of competitive efforts to capitalize on the smoking/health controversy.

170042567-2574 at 2568, 2574 (U.S. 20292); Smith WD, 79:5-22.

2164. An August 5, 1980 B & W document signed by J. Kendrick Wells III, B & W Assistant General Counsel, acknowledged that "[t]here was question about the degree of support ... at the present time" for the "scientific opinion that certain low levels of tar' consumption are relatively safe to the smoker," and that "for the longer term the support may be quickly eroding." 680050983-1001 at 0990 (U.S. 20981).

2165. An October 31, 1989 B & W internal memorandum, titled "Objections to Product Innovation Strategy," from Wells to RJ Pritchard, B & W executive and member of the Tobacco Institute's Executive Committee, conceded that "it is not established that the reduction or removal of specific smoke constituents or of smoke constituents across the board, such as in low tar cigarettes, is significant for smoking and health." 680701034-1038 at 1035 (U.S. 21010); Wells WD, 60:3-61:10.

2166. Sharon Blackie Boyse, Director of Scientific Communications and a spokesperson for B & W on scientific issues as late as 1998, acknowledged that, "based on [her] experience as an employee within the cigarette industry, [she has] been aware for some time that some smokers believe that low tar

cigarettes are less hazardous to their health [and that] some smokers believe that by switching to low tar cigarettes, they will achieve a health benefit." From at least as early as 1998, B & W acknowledged that the company "did not know whether low tar cigarettes were, in fact, less hazardous," and "was not confident that the science showed any health benefit from low tar cigarettes." Blackie WD, 184:22-185:5.

2167. As of 2005, B & W's website admits that low tar cigarettes are not safer than regular cigarettes. It states that "despite a dramatic lessening of tar yields, the hoped-for reduction of smoking-related illnesses has not been conclusively demonstrated." Furthermore, the website directs the reader to the National Cancer Institute's Monograph 13, citing its conclusions

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that "[e]pidemiological and other scientific evidence, including patterns of mortality from smoking-caused diseases, does not indicate a benefit to public health from changes in cigarette design and manufacturing over the last fifty years," and that "[w]idespread adoption of lower-yield cigarettes in the United States has not prevented the sustained increase in lung cancer among older smokers." The website further states: "[W]e continue to believe that smokers should rely on the public health authorities' views on low tar cigarettes and other smoking issues." Ivey WD, 63:9-16; (no bates) (U.S. 86656).

(4) BATCo

2168. A 1976 BATCo document from S.J. Green to P.L. Short and P. Sheehy revealed both that BATCo planned to market low tar cigarettes as safer and that BATCo did not have a sufficient basis to believe that low tar cigarettes were safer, stating: "Before we do work aimed to sell low delivery cigarettes, unless we are already satisfied, we should do some work to establish that in fact they are safer." 110076428-6432 at 6430 (U.S. 34957).

2169. A June 9, 1982 BATCo document, "Technical Exchange Meeting," noted that Ames testing revealed that "[t]he specific activity [a measure of mutagenicity] of a plain cigarette was found to be lower than that of a ventilated filter cigarette." 109883189-3192 at 3191 (U.S. 20265).

2170. A February 18, 1988 BATCo study of cigarette mutagenicity from the B & W Research & Development Library's E.D. Massey found that the "lighter" the purported delivery of the cigarette, the higher the mutagenicity. Using Philip Morris cigarettes as an example, Merit cigarettes had higher mutagenicity than Marlboro Lights, which in turn had more mutagenicity than regular Marlboro cigarettes. 620000021-0032 at 0027, 0030 (U.S. 20944).

(5) Lorillard

2171. Asked whether low tar/low nicotine cigarettes are any safer than conventional, full-flavor cigarettes, Christopher Coggins, Senior Vice President of Science and Technology at Lorillard, stated: "[O]ur policy is that cigarettes can cause cancer and that goes for all cigarettes." Coggins PD, United States v. Philip Morris, 8/16/01, 115:22-116:4.

(6) Liggett.

2172. Comments by Liggett scientists on a "Memorandum of June 13, 1966; C.F. Woodward and C.L. Ogg to P.A. Wells" acknowledged that there was no basis to conclude that reductions in tar and nicotine and/or the use of filters reduced the harmfulness of cigarettes:

Although the public does have a right to know what it is buying, extreme care must be exercised to avoid leading a non-technically oriented public to erroneous conclusions regarding the relative merits of one brand versus another based on minimal differences in "tar" or nicotine—to neither of which can be attached any quantitative measure of health hazard . . . We would question if any differences between any filter brands would show correlation with tumorigenicity. We know of no correlation of tar delivery among filter brands with tumor production in mice—or for that matter, even among non-filter cigarettes. The level of uncertainty in current biological testing is so great that distinction between cigarettes is not possible on this basis.

LWDOJ00068944-8949 at 8944-45 (U.S. 21214) (emphasis in original).

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b. Internally, Defendants Had an Extensive and Sophisticated Understanding of Smoker Compensation

2173. Defendants have known since at least the 1950s that the central component that drives the smoking habit is nicotine, an addictive substance. Accordingly, Defendants also have long been aware that the reason people smoke cigarettes is to obtain a sufficient "dose" of nicotine to sustain their addiction. 1003287880-7890 at 7884 (U.S. 20163); accord 500380562-0564 (U.S. 20630); 100515899-5910 (U.S. 20230); 1003285403-5416 (U.S. 20159); 500917468-7476 at 7474-76 (U.S. 20660); 105553905-3914 (U.S. 34799).

2174. Defendants also have known since the 1960s and 1970s that, because smokers smoke to obtain the desired effects of nicotine, smokers of lower-yield cigarettes tend to adjust their smoking behavior to titrate (i.e., control) their nicotine intake of nicotine to achieve the necessary levels of nicotine. That adjustment or titration of nicotine levels is called compensation. Defendants' internal understanding of compensation was decades ahead of that of employees and scientists of the Government and the scientific community. See Section V(B)(2)(b), *supra*. According to Dr. William Farone, Philip Morris employee from 1976 to 1984, who served as Director of Applied Research, and was accepted as an expert in "the chemistry and biochemistry of alkaloids and addictive drugs, the chemistry and physics of cigarette smoke, cigarette design and technology, and the chemistry and biochemistry of toxic substances and how they interact with living systems," during his employment at Philip Morris, the company had "a greater understanding of compensation than the outside scientific community," and, in his expert opinion, "the same is true for the other tobacco company Defendants." In 1966, when the FTC was considering the FTC Method, Defendants knew "that smokers smoked for nicotine" and "that smokers alter their smoking behavior to get nicotine." Farone WD, 2:2-8, 2:15-19, 117:15-118:8; Farone TT, 10/12/04, 2169:18-22, 2170:5-11, 2171:25-2172:8, 2182:11-2190:7; Wigand WD, 8:11-17; 120:5-17.

2175. When Dr. Farone was Director of Applied Research, Philip Morris's own research found that "if we adjusted the design to reduce the nicotine delivery, or if people were given a cigarette of lower nicotine delivery than their usual brand, smokers would 'compensate'—change how they smoked—to get the amount of nicotine they need." Farone WD, 102:2-14; see also Farone WD, 104:7-15 (testifying

that he knows Philip Morris was aware of compensation for nicotine "[f]rom conversations that I had with many of my colleagues at Philip Morris while I was working there, including people working under Dr. Dunn in his behavioral research group," and that this knowledge "is evident from the company's own documents").

(1) Philip Morris

2176. In a March 24, 1961 Philip Morris memorandum from Wakeham to Hugh Cullman, "Trends of Tar and Nicotine Deliveries over the last 5 Years," Wakeham stated: "As we know, all too often the smoker who switches to a hi-fl cigarette winds up smoking more units in order to provide himself with the delivery which he had before." 1000861953-1953 (U.S. 35484); see also Farone WD, 104:16-105:9 ("[T]his research into and understanding of compensation influence[d] how Philip Morris designed cigarettes").

2177. As Philip Morris marketing researcher Myron E. Johnston noted in a June 1966 Philip Morris report titled "Market Potential for a Health Cigarette":

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[A]ny health cigarette must compromise between health implications on the one hand and flavor and nicotine on the other. It seems clear from the performance of existing health cigarette entries that flavor and nicotine are both necessary to sell a cigarette. A cigarette that does not deliver nicotine cannot satisfy the habituated smoker and cannot lead to habituation, and would therefore almost certainly fail.

1001913853-3878 at 3860 (U.S. 20123).

2178. A July 28, 1967 Philip Morris USA memorandum from W.L. Dunn, Jr., then Associate Principal Scientist, to R.B. Seligman, Director of Development, discussed ventilation holes and compensation:

An earlier study (Memo of June 27, 1967) established that lip contact with the tipping paper extended to 9.96 mm from the outer end of the tipping paper for the average smokers. Since the air dilution holes are located in a band from 8.0 to 9.7 mm from the outer end of the tipping paper, it follows that some of these holes are likely to be occluded under normal smoking conditions, whereas no occlusion is likely to occur when the cigarettes are machine smoked for analysis.

The memorandum also documents that "[s]mokers adjust puff intake in order to maintain TPM [total particulate matter] and/or nicotine constancy." 1003295500-5502 at 5500, 5502 (U.S. 88627).

2179. An August 11, 1967 Philip Morris USA document from Helmut Wakeham, Vice President of Corporate Research and Development, to Paul D. Smith, Vice President and General Counsel, stated that human smokers increased their smoke intake when switching from non-filter to filter cigarettes:

Two tests conducted at Product Opinion Laboratories demonstrate that in smoking a dilution filter cigaret [sic], the smoker adjusts his puff to receive about the same amount of "undiluted" smoke in each case In the smoking machine the puff volume is constant so that with dilution the quantity of "equivalent undiluted smoke" delivered to the Cambridge filter is reduced. Not so with the human smoker who appears to adjust to the diluted smoke by taking a larger puff so that he still gets about the same amount of equivalent undiluted smoke The smoker is, thus, apparently defeating the purpose

of dilution to give him less "smoke" per puff. He is certainly not performing like the standard smoking machine; and to this extent the smoking machine data appear to be erroneous and misleading. It has probably always been so for diluted smoke cigarettes, whether dilution is obtained by porous paper or holes in the filter.

1000322554-2555 (U.S. 35224) (emphasis in original); see also Dr. Jerry Whidby WD, 17:16-19:11 (testifying that "Product Opinion Laboratories was a facility established by Philip Morris to evaluate smokers' reaction to the cigarette brands Philip Morris was selling, as well as to Philip Morris's prototype cigarettes," and that he is not "aware of any instance, at any time between when Dr. Wakeham wrote this document in 1967 and when [Dr. Whidby] left the company in 1998, in which Philip Morris informed the American public directly of Wakeham's conclusions that the FTC tar and nicotine yields are apparently 'erroneous and misleading,'" and "dilution filter cigarettes generated lower FTC yields than non-dilution cigarettes, but delivered about the same amount of smoke to smokers").

2180. Dr. Farone explained the extraordinary significance of Wakeham's statements in this document:

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It shows that Philip Morris understood the puff compensation phenomenon. This document shows that by 1967, Philip Morris recognized that when you have dilution or ventilation, the mechanism for compensation is puff adjustment ... this document [also] shows that Philip Morris knew in 1967 that human smokers compensated by increasing their smoke intake when switching from non-filter to filter cigarettes, and in doing so, smokers received the same amount of tar and nicotine from their filter cigarettes as from non-filter cigarettes. It also shows Wakeham's understanding that the FTC tar and nicotine yields for low tar cigarettes are erroneous and misleading.

Farone WD, 111:5-112:15.

2181. Since roughly the mid-1970s, the "vast majority of the low tar and ultra-low tar cigarettes sold by Philip Morris in the United States . . . are dilution cigarettes." Whidby WD, 19:16-18.

2182. In an August 25, 1967 Report on Project 1600, William Dunn, Senior Scientist, outlined an additional study performed by Philip Morris on puffing, with findings that provided "further support to the postulate that smokers adjust puff intake in order to maintain constant smoke intake." 1003288337-8338 at 8337 (U.S. 85049).

2183. In a Fall 1969 speech, William Dunn reported to the Board of Philip Morris: "It would appear that smokers do modify their smoking habits in order to obtain a preferred [nicotine] intake level." 1003287880-7890 at 7884 (U.S. 20163).

2184. Helmut Wakeham presented a November 26, 1969 internal industry paper, titled "Smoker Psychology Research," to the Philip Morris Board of Directors stating:

This great variability among smokers results from the fact that a smoker tends to seek his own level of intake. Even while smoking a single cigaret [sic], he adjusts the volume of his puff as he goes down to the rod, compensating for the change in the density of the available smoke A smoker's intake level is determined by the smoker himself, not by the manufacturers of the cigarettes.

1000273741-3771 at 3748 (U.S. 26080).

2185. A September 2, 1970 Philip Morris memorandum from Ray Fagan to Wakeham confirmed Philip Morris's understanding that smokers compensated for lower deliveries by smoking more cigarettes:

In the last 15 years particulates in cigarette smoke have declined by 33%; however, the number of cigarettes per smoker has increased. Furthermore, experimental studies have shown that a smoker will increase the number of cigarettes he smokes if the cigarette he is offered contains less particulates and less nicotine.

2022244449 4450 at 4449-4450 (U.S. 36855); Farone WD, 110:6-14; 118:9-23.

2186. A November 1971 Philip Morris Special Research Report written by Tom Schori also addressed compensation by increasing the number of cigarettes smoked. The last sentence of the abstract of this report stated: "These findings support the hypothesis that the smoker does have daily intake quotas for tar and/or nicotine and that he titrates his smoke intake to meet these quotas." 1000350158-0188 at 0161-0162 (U.S. 20176).

2187. A January 1972 document from Philip Morris Research Center, written by Tom Schori and William Dunn, reviewed Philip Morris's evidence indicating that smokers compensated when smoking brands supplying less nicotine in order to

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receive their "daily nicotine intake quota," stating:

Cigarette consumption rate, i.e., number of cigarettes smoked per day, was found to vary as a function of the nicotine delivery of these cigarettes. Specifically, as nicotine increased, cigarette consumption decreased. These findings support the notion that smokers develop a daily nicotine intake quota and that when smoking cigarettes differing in nicotine delivery from that which they are accustomed they tend to modify their consumption rate in order to maintain their normal quota. No support was found for the analogous notion of a daily tar intake quota, however.

1003285403-5416 at 5403 (U.S. 20159); 2062951266-1279 at 1266 (U.S. 39723); Farone WD, 111:1-4 (referring to U.S. 20159); Henningfield WD, 94:14-21 (referring to U.S. 39723 as "significant in terms of Defendants' knowledge and understanding of the addictiveness of nicotine from the 1970s").

2188. A May 14, 1975 Philip Morris memorandum from William Dunn to Robert Seligman, Vice President for Tobacco Science and Research, stated:

Underlying all of our work in this area is the conviction what the smoker gets in the way of smoke is independent of smoke concentration levels as delivered within the range of commercially available cigarettes. He has a variety of regulatory maneuvers at his disposal for accommodating supply to a fairly constant need [for nicotine]. To monitor all of these maneuvers simultaneously is a major objective of our behavioral research program.

1000024914-4920 at 4915 (U.S. 26072).

2189. An August 19, 1977 Special Report from the Philip Morris USA Research Center written by Barbara Goodman, a Research Scientist, described Philip Morris's "Human Smoker Simulator," a mechanism the company used to replicate human smoking behavior. The Simulator recorded how smokers smoked particular cigarettes by measuring their puffing behavior, then played back the recording into a smoking machine so the machine could replicate—and then measure—the amount of smoke constituents and the chemical composition obtained from a cigarette when smoked the same way the human had smoked it. The document states: "The Smoker Simulator program has the instrumentation to measure those smoker variations that constitute a smoker's puffing profile and a programmable smoking machine to measure the resulting tar, nicotine, and water deliveries." 1003728025-8039 at 8027 (U.S. 20179); Whidby WD, 21:19-28:9; Whidby TT, 2/22/05, 13989:19-13991:6; see also 1003293476-3493 at 3484 (U.S. 85073) ("The cassette tape impulses an electronic smoking machine which duplicates exactly the smoking behavior of a given individual with a given cigarette. Delivery of tar, nicotine, and other smoke components can then be determined at the same conditions.").

2190. A Philip Morris Report dated July 20, 1981, written by Frank Gullotta and J.A. Jones and sent to William Dunn and 40 others, including Dr. Whidby, described Philip Morris's Human Smoker Simulator program as "a system ... which permits relatively unobtrusive monitoring of a smoker's inhalation patterns outside the laboratory setting," and indicated that "the system's accuracy was highly satisfactory throughout the experiment" and had "a mean accuracy reading of 96% ... for 70 experimental sessions." The Report also indicated:

A major barrier to investigations on smoke-laden inhalation patterns has been the lack of instrumentation which would accurately measure inhalation pa

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rameters, and yet be unobtrusive to the smoker. The system we have acquired breaks this barrier by permitting accurate and relatively unobtrusive monitoring of inhalation patterns under natural smoking conditions.

2025986350-6401 at 6352-6353, 6382 (U.S. 87080).

2191. The July 20, 1981 Report includes a number of statements reflecting Philip Morris's understanding of smoker compensation:

That roughly 20% or less of smokers take puffs equal to or smaller to those taken by the FTC Method machine smoking protocol.

"The varying puff sizes in turn also give increased deliveries above those of the FTC Method.

"Smoker profile characteristics have been found to be affected by the cigarette design parameters to varying degrees."

"A cigarette designed such that it causes the smoker to take larger puffs than the compared model could easily be perceived as having more impact (desirable or undesirable as the case may be)"

Lists low resistance to draw and "high filter dilution" as the top two "physical cigarette designs that have the effect of increasing a smoker's puff volumes."

"In conclusion, when a smoker is presented with a cigarette other than his normal brand, it is possible to estimate the maximum flow rate to a certain degree. The puff duration will increase with increasing RTD [resistance to draw] and/or filter dilution. Since the volume is based on both flow and duration, the puff volume will change accordingly."

Test results showing that smokers of full-flavor, light and ultra light cigarettes all took larger puffs than in the FTC Method, and that the smokers' puffs were increasingly large for lower tar cigarettes, so that, for full-flavor smokers, "average tar deliveries were 45% higher than" the FTC yields, low tar smokers "showed a higher rate of increase, 81%," and, for ultra light cigarettes, "[t]he average tar delivery" was "more than three times that of" the FTC yield.

1003728025-8039 at 8027, 8028, 8032, 8034, 8036, 8037 (U.S. 20179); Whidby WD, 22:18-23:9, 23:17-21, 24:6-13, 25:14-18, 26:21-27:5, 27:15-28:9; see also 2025986350-6401 at 6353, 6384 (U.S. 87080); Whidby WD, 53:10-55:21 ("Preliminary results suggest that inhalation patterns are modified in response to changes in the available nicotine in the cigarette smoked . . . The results from studies which analyze blood plasma and urine nicotine concentrations . . . suggest that nicotine compensation is fairly complete.").

2192. A September 17, 1975 Philip Morris document from Goodman to Leo F. Meyer, Philip Morris Director of Research, reflecting results of Philip Morris's studies with its Human Smoker Simulator, reported that, due to compensation, smokers got as much tar and nicotine from Marlboro Lights as from full-flavor Marlboros:

Marlboro Lights cigarettes were not smoked like regular Marlboros. There were differences in the size and frequency of the puffs, with larger volumes taken on Marlboro Lights by both regular Marlboro Smokers and Marlboro Lights smokers . . . The panelists smoked the cigarettes according to physical properties; i.e., the dilution and the lower RTD of Marlboro Lights caused the smokers to take larger puffs on that cigarette than on Marlboro 85's. The larger puffs, in turn, increased the delivery of Marlboro lights proportionally. In effect,

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the Marlboro 85 smokers in this study did not achieve any reduction in smoke intake by smoking a cigarette (Marlboro Lights) normally considered lower in delivery.

The report's "Conclusions" section noted that "[t]he smoker data collected in this study are in agreement with results found in other project studies." 2021544486-4496 at 4486-4488 (U.S. 20348); see also Whidby WD, 45:11-12 (noting, in the context of this exhibit, that "Marlboro 85's" refers to Marlboro Reds, a full-flavor cigarette brand).

2193. As Dr. Burns explained, "there are three things that are powerfully significant in this document":

(1) It "very clearly demonstrates that, in contrast to what we believed six years later when we wrote the 1981 Surgeon General's Report, smokers who smoked brands of cigarettes on the market in 1975 were not getting different yields when they smoked those products. We [in the public health community] believed they were."

(2) "[T]his is dated 1975, six years prior to the time the [1981] Surgeon General's Report reached its conclusion. And we did not have access to this information or comparable information."

(3) "[T]his study was done on a machine that mimicked actual smoking behaviors, that actually matched the behavior of the individual when the machine smoked the cigarette. In 1981, one of the recommendations that we made . . . was that this type of machine should be developed so that we could develop a better understanding of the relationship between delivery of tar and nicotine of these cigarettes when they were actually smoked. So ... six years prior to the time we were reviewing that evidence for the Surgeon General, this information was available to Philip Morris."

Burns WD, 52:15-53:12.

2194. One other Philip Morris Human Smoker Simulator report compared the deliveries of the full flavor and light versions of brands Philip Morris was selling. That report, dated September 23, 1976, measured the smoking behavior—and resulting tar and nicotine deliveries—of 150 fullflavor cigarette smokers for several years. This Human Smoker study's results revealed that, while Marlboro 100s are both full-flavor cigarettes and longer in length than Marlboro Lights, "the tar and nicotine yields for these two brands are basically identical." Whidby TT, 2/22/05, 14099:12-14106:6, 14106:15-14107:1; 1003727277-7298 at 7280, 7281, 7290 (JD 040539).

2195. Philip Morris stopped all testing with the Human Smoker Simulator in 1981. Whidby TT, 2/22/05, 13991:15-13992:13.

2196. A March 1, 1977 Philip Morris memorandum from Stanley Schachter to Thomas Osdene, Director of Research, concluded: "Serious smokers smoke to prevent withdrawal. Smokers regulate nicotine intake . . . The smoker who fails to regulate suffers withdrawal." 1000046626-6661 at 6654-6655 (U.S. 35105).

2197. An October 16, 1981 memorandum from Jan Jones to William Dunn, titled "Nicotine Retention Research Proposal," stated:

Research on smoke-laden inhalation patterns, using the ambulatory monitoring instrumentation, has provided preliminary evidence that inhalation behavior is modifiable, and is altered as a function of changes in the nicotine delivery of the cigarette. We are observing changes in

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inhalation parameters in the direction which would suggest compensation for increases or decreases in nicotine relative to the subject's usual brand.

1000136372-6373 at 6372 (U.S. 35162).

2198. In a November 29, 1982 report, "The Effect of Cigarette Nicotine Content on Smoker Puff Parameters and Deliveries," Philip Morris scientists reported the results of their study of "puff number, puff volumes, puff durations, flow rates and puff intervals," which showed smokers "generally tended to decrease puff duration, puff number and puff volume and increase puff interval as the nicotine level of the cigarette increased." 1000408760-8809 at 8762, 8764, 8771 (U.S. 35272).

2199. Carolyn Levy, a research scientist for Philip Morris in its Behavioral Research Group from 1975-1980, testified that she "worked on the issue of whether individuals regulated the amount of

nicotine they obtained from smoke," and as part of that work she "monitored how smokers inhaled smoke from cigarettes with varying tar and nicotine deliveries." Levy further testified that, as a result of this research, she was able to "gather evidence that some people change their smoking behavior in response to cigarettes with differing tar and nicotine deliveries." When Levy requested publication, she "was told not to publish or was not given approval to publish by the manuscript review board." Levy WD, 10:16-11:15.

2200. A November 1999 presentation, titled "PM USA Discount Brands," given to Geoffrey Bible, Chairman of the Board and CEO of Philip Morris Companies, noted in a Product Comparison chart that Ultra Light products have a higher puff count than Full Flavor products. 2070662118-2389 at 2176 (U.S. 87914*).

(2) R.J. Reynolds

2201. In a March 28, 1972 memorandum marked "RJR SECRET" from Claude Teague to E.A. Vassallo and Murray Senkus, titled "A Gap in Present Cigarette Product Lines and an Opportunity to Market a New Type of Product," Teague stated: "I believe that for the typical smoker nicotine satisfaction is the dominant desire, as opposed to flavor and other satisfactions." The document went on to state:

Given a cigarette that delivers less nicotine than he desires, the smoker will subconsciously adjust his puff volume and frequency, and smoking frequency, so as to obtain and maintain his per hour and per day requirement for nicotine (or, more likely, will change to a brand delivering his desired per cigarette level of nicotine).

Teague further stated:

[R]egardless of which cigarette the smoker chooses, in obtaining his daily nicotine requirement he will receive about the same daily amount of tar. If, as claimed by some anti-tobacco critics, the alleged health hazard of smoking is directly related to the amount of tar to which the smoker is exposed per day, and the smoker bases his consumption on nicotine, then a present "low tar, low nicotine" cigarette offers zero advantage to the smoker over a regular filter cigarette, but simply costs him more money and exposes him to substantially increased amounts of allegedly harmful gas phase components in obtaining his desired daily amount of nicotine.

The document ends with the statement that "[t]he thoughts and philosophies expressed above come from many sources and certainly are not solely those of the writer." 500790776-0784 at 0778, 0782-0784 (U.S. 29473).

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2202. A document titled "Smoking Satisfaction" and labeled as a "[t]alk delivered to RJR Tobacco Company management, June 23, 1974 and RJR Tobacco International management, August 4, 1976" by Murray Senkus, Director of Scientific Affairs for RJR until 1979, stated

[T]he amount of nicotine that one can get in the lungs from low tar cigarettes is much less. So the smoker then resorts to other means to get the nicotine he needs in the blood from low tar cigarettes by longer puffs, by bigger puffs, by more frequent puffs, and also by smoking more cigarettes each day. It has been observed that as one switches from a non-filter to a filter, one smokes more cigarettes per day. But eventually one can change his style of smoking so one can get enough nicotine in the blood

during the inhaling step by changing the smoking style; i.e. longer puffs, bigger puffs, and more frequent puffs. Surveys have shown that in switching to lower tar cigarettes, smokers have not necessarily increased the number of cigarettes per day.

501525355-5366 at 5360-5361 (U.S. 29531).

2203. Senkus, in a speech he gave at RJR in both late 1976 and early 1977, "Some Effects of Smoking," demonstrated RJR's knowledge that smokers compensate for lower delivery cigarettes to obtain their required nicotine level, and confirmed that the other Defendants also knew this:

[T]here are ways to increase or decrease the amount of nicotine one can obtain by smoking a single cigarette: One can take a deeper puff or shallower puff... . One can puff more frequently or less frequently.. . . One can take a deeper puff and hold the smoke in the lungs longer before exhaling to assure complete transfer of nicotine into the body fluids. Without any question, the desire to smoke is based on the effect of nicotine on the body.... [T]he amount of nicotine that one can get in the lungs from low tar cigarettes is much less. So the smoker then resorts to other means to get the nicotine he needs in the blood from low tar cigarettes, by longer puffs, by larger puffs, by more frequent puffs, and also by smoking more cigarettes each day. One can get enough nicotine into the blood during the inhaling step by changing the smoking style; i.e., longer puffs, bigger puffs, and more frequent puffs It is worth noting that our competitors are aware of the significance of the quality and quantity attributes of nicotine. Moreover, they are fully aware of the advisability of maintaining a low tar value and also maintaining the nicotine as high as possible [referring to Philip Morris's Marlboro and Merit, and Lorillard's True brand].

500251711-1722 at 1714,1718, 1720 (U.S. 48076).

2204. In an April 5, 1982 RJR report from J.H. Robinson and J.H. Reynolds to Dr. D. Werner, the authors admitted that the nicotine delivered under human smoking conditions was "more than 200%" of that advertised, stating that "the smoker can adjust his puffing characteristics to obtain the same level of nicotine from different cigarettes. This represents the first concrete evidence that smokers compensate to obtain a consistent amount of nicotine. Relevant to this, it should be noted that all cigarettes experienced a marked reduction in nicotine filter efficiency under human smoking conditions compared to the nicotine filter efficiencies obtained under standard FTC conditions." 508028982-8984 at 8983 (U.S. 85053).

2205. John Robinson, RJR's Principal Scientist in psychopharmacology, wrote a July 25, 1983 memorandum to Alan Rodgman,

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titled "Critique of Smokers of Low-Yield Cigarettes Do Not Consume Less Nicotine," which essentially agreed with the conclusions in an article written by Dr. Neal Benowitz showing that smokers compensate to obtain a stable nicotine dose in their bloodstream. The article stated:

The paper itself expresses what we, in behavioral, have "felt" for quite some time. That is, smokers smoke differently than the FTC machine and may very well smoke to obtain a certain level of nicotine in their bloodstream. If a given level of nicotine in the blood is the final goal of a smoker, one would predict that he would smoke an FFT [full-flavor tar] and ULT [ultra low tar] cigarette differently. If the

smoker could obtain the same nicotine in his bloodstream from an FFT and ULT cigarette by modifying his puffing/inhaling pattern, it would be expected that the blood cotinine level would be the same after smoking either cigarette on a regular basis . . . the data reported in this paper remind us of the HMSM experiment done with the German Camel and Marlboro cigarettes. While there were certain imperfections in this experiment, you may recall that the smokers apparently obtained almost exactly the same amount of nicotine no matter which of the four cigarettes they smoked. This was one of the first indications that smokers may, in fact, smoke to obtain a certain level of nicotine in their bloodstream. Data like these made me feel that the data reported in this current publication are probably correct.

502680871-0871 (U.S. 49198); see also 508978013-8025 at 8014 (U.S. 20819) (acknowledging that smokers who switched to low-tar products typically "compensated," and indicating that a smoker "has his or her own nicotine requirement from each cigarette" and "adjusts [his/her] smoking maneuver" to obtain the "desired level of nicotine").

(3) Brown & Williamson

2206. Minutes from a January 12-18, 1974 B & W/BATCo conference stated: "[W]hatever the characteristics of cigarettes as determined by smoking machines, the smoker adjusts his pattern to deliver his own nicotine requirements." 109882674-2679 at 2675 (U.S. 21507).

2207. B & W's scientific research on compensation was confirmed by its consumer research on low tar cigarettes, in which smokers reported compensating for the reduced deliveries. For instance, a February 23, 1977 consumer research report, "Consumer Discussions of Low Delivery Cigarettes," written by R.F. Brotzge and W.H. Deines, demonstrates B & W's awareness that low tar smokers were compensating by smoking more cigarettes, stating:

Findings, in order of importance, to participants in the five focus groups were: 1. Health—Participants expressed general fears about cancer, emphysema, other lung diseases, etc. Despite these fears, they stated their determination to continue smoking. . . 5. Compensation—Participants noted they smoked more low tar cigarettes and received less satisfaction.

679009843-9867 at 9843 (U.S. 85055).

2208. Similarly, a July 25, 1977 B & W Internal Marketing Study, titled "Low `Tar' Satisfaction, Step 1 Identification of Perceived and Underperceived Consumer Needs," analyzed smokers' satisfaction with low tar cigarettes with regard to switching behavior, and stated: "It was noted earlier that new arrivals to the Hi-Fi category realize that they are smoking more cigarettes [quoting a study participant]: 'You can also go down to the lower tar, but increase your smoking. So you're

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right back where you were.'" The study further noted that "Cigarette consumption, as reported in a 1976 Consumption Study, increases as nicotine (satisfaction per cigarette) decreases." 775036039-6067 at 6050 (U.S. 21053).

2209. A report bearing the stamp "Brown & Williamson June 24, 1980 R & D Library" prepared by BATCo on April 23, 1980, titled "Compensation: A Review [of] the Relationship Between Compensation and Changes in Cigarette Design," stated that studies indicated that compensation was a permanent

phenomenon: "On the basis of the German studies, compensation would therefore be seen as a long-term tendency to permanently adjust towards some preferred (or minimum) level [of nicotine]:" 650032329-2385 at 2356 (U.S. 53429); Ivey WD, 68:1-10.

2210. A July 1983 B & W report by W. Wiethaup and W. Schneider, "Filter effects on smoke and smoke effects," stated:

One factor, which may be responsible for a relatively intensive "strength" impression within a given tar segment, is the "smoke elasticity." The smoke elasticity describes the potential of a cigarette, to provide the smoker with more smoke, if he draws harder. This becomes relevant at least for the first few puffs of a low tar cigarette, as all recent investigations show.

512107109-7120 at 7110 (U.S. 85056).

2211. A March 26, 1999 e-mail from Hugh Honeycutt to Mike Dixon and numerous other BATCo employees referenced B & W's "Atlanta Study," which was conducted by scientist Kelly St. Charles, to examine smoking behavior and puffing profiles for low tar cigarettes. Honeycutt's email expressed concern that "B & W had just made a big splash in the U.S. touting Carlton as the '1' for you,"—a marketing slogan indicating that Carlton delivered only one milligram of tar—in light of research finding that "smokers of ultra low tar brands like our Carlton 1 mg appeared to actually get 3 mg." of tar. 321155579-5580 at 5579 (U.S. 46683); 2073168412-8414 (U.S. 22024). As of June, 2004, B & W admits that smoker compensation causes Carlton 1 mg smokers, on average, to inhale 5 to 6 times the amount of tar that B & W has advertised. (no bates) (U.S. 88628) (stating "a Carlton 1 mg. smoker will, on average, get 5 to 6 milligrams of tar").

(4) BATCo

2212. A BATCo document from the late 1970s, "Why do People Smoke?," reflects BATCo's understanding of compensation, stating that "[n]icotine sustains smoking behaviour," that "smoking behaviour is highly responsive to cigarette design," and that "[a] key determinant of product preference will be the design 'Effort-Reward Gradient,'" i.e., elasticity of delivery. The document added: "Increase in Cigarette Consumption [is] Related to Change in Nicotine Yields," noting that "[m]ost compensation must occur at the individual cigarette level." 403626692-6802 at 6729, 6731, 6734, 6762, 6768 (U.S. 85018*).

2213. An undated BATCo document by Dr. S.J. Green, a Senior Scientist for BAT-Co Research and Development, titled "Ranking Cigarette Brands on Smoke Deliveries," discussed compensation to equalize nicotine intake in several contexts, including smokers "increas[ing] puff volume to receive the same nicotine" when smoking a lower tar cigarette and smokers "adjust[ing] their smoking behaviour on the basis of nicotine intake." 110077247-7268, at 7247-7250 (U.S. 88643).

2214. A March 11, 1971 report written by D. Creighton, BATCo R & D Research Scientist, and L.M. McGillivray, titled

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"The Effect of Changed Deliveries at Constant Pressure Drop on Human Smoking Pattern," stated:

It was found that there is indeed a degree of compensation for the reduced delivery. The panel as a whole took larger puffs from the lower delivery cigarette, inhaled the smoke more deeply and held the smoke in the lungs for a longer time. The six individual panel members compensated for changed delivery in different ways, some by increased volumes, and others by increased number of puffs on the lower delivery cigarette.

The report also stated: "An increase in puff volume, but not puff duration, means that subjects must have drawn harder on the lower delivery cigarettes, and that the flow rate was greater during puffing. This implies that smokers are willing to work harder to achieve an optimum delivery from a lower delivery cigarette." The report further stated:

The fact that the panel compensated for the lower delivery by increasing the depth of inhalation, the depth of exhalation and the total time for which the smoke was held within the body is of particular interest in the light of the finding that more is retained from a puff of smoke that is inhaled deeper, and held within the lungs longer.

757001173-1185 at 1174, 1180 (U.S. 85058); see also 102793967-3980 at 3969 (U.S. 34698).

2215. A June 17, 1975 BATCo document, "Compensation for Changed Delivery," sent to several BATCo employees, including David Geoff Felton, Senior Scientist for BATCo Ltd.'s Research and Development Department, acknowledged that smokers compensate to achieve a stable dose of nicotine:

A number of experiments ... have been interpreted as showing that compensation for changed delivery does occur . . . Our own results showed that when the [tar] to nicotine ratio was changed more smoke was taken from the lower delivery cigarette . . . My own view is that compensation for changed delivery of nicotine does occur . . . The weight of evidence at present available is for nicotine compensation [referring to several studies].

105658168-8179, 8168, 8178 (U.S. 85418).

2216. A June 1, 1976 BATCo report, also titled "Compensation for Changed Delivery," written by D. Creighton, R & D Research Scientist, concluded that

the evidence is strongly in support of the hypothesis that many smokers do change the way they smoke in response to cigarette design changes that affect nicotine delivery . . . The tendency amongst the majority of established smokers is to attempt to equalise nicotine delivery if the cigarette design allows them to do so.

The study further concluded that "[d]ue to the differences in the delivery of individual cigarettes from the same brand ... and the differences between subjects and within a subject" "[e]qualisation [of nicotine levels] within the range + 20%" was expected. The report stated that "there are eight suggested methods by which a subject may regulate his nicotine intake; any number of which may be used simultaneously or at different times," namely by varying puff volume, puff number, puff distribution, cigarette butt length, puff interval, puff profile, inhalation pattern, and number of cigarettes smoked. 650008449-8480 at 8470, 8460-8462, 8469, 8464 (U.S. 76192).

2217. A June 27, 1978 BATCo memorandum, also titled "Compensation for Changed Delivery," written by Creighton, confirmed BATCo's knowledge that compensation

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is not temporary, and occurs as a result of a need for nicotine, and contradicted "the advice of Health Authorities" that smokers who would not or could not quit should switch to a lower delivery cigarette:

It is difficult to ignore the advice of Health Authorities who advise smokers to give up smoking or change to a lower delivery brand but there is now sufficient evidence to challenge the advice to change to a lower delivery brand, at least in the short-term. Numerous experiments have been carried out in Hamburg, Montreal, and Southampton within the company as well as many other experiments by research workers in independent organizations, that show that generally smokers do change their smoking patterns in response to changes in the machine smoked deliveries of cigarettes Further findings from these results were that the modified smoking patterns used to smoke the changed delivery brands were maintained for the month during which they were smoked. This shows that there was no adaptation during that time In general, a majority of habitual smokers compensate for changed delivery, if they change to a lower delivery brand than their usual brand.... If they choose lower delivery brand which has a higher tar to nicotine ratio than their usual brand (which is often the case with lower delivery products) the smokers will in fact increase the amounts of tar and gas phase that they take in, in order to take the same amount of nicotine.

105553905-3914 at 3905, 3907, 3913 (U.S. 34799); Ivey WD, 69:14-70:1.

2218. A June 29, 1979 study written by Creighton, "A Comparison of Smoking Surveys Separated by Four Years," compared the smoking behavior of a group of smokers in 1974 of a cigarette with 1.7 mg nicotine and 27 mg TPM to their behavior in 1978 when smoking a cigarette with a slight reduction in nicotine (by 17% to 1.4 mg) and virtually identical TPM delivery (26 mg). The study found that the group smoked the reduced nicotine cigarette "more intensely" (i.e., increased their puff volume), which likely "equalised" the nicotine delivery of the two cigarettes. The study concluded that "it is probable that as a result of the changes in smoking behaviour observed in this study, subjects took about the same amount of nicotine from the two different cigarettes but, because of changes in TPM to nicotine ratios, received more TPM from the [reduced nicotine cigarette]." The study further found that [t]he fact that smokers have changed their smoking patterns to take more smoke from a cigarette with lower nicotine delivery but similar TPM delivery adds support to the contention that nicotine is a major determinant of smoking behavior, and that TPM, as long as it is delivered in sufficient quantity, plays a lesser role.

650008946-8960 at 8948, 8953-8955 (U.S. 85059).

2219. An April 27, 1981 memorandum by Martin Oldman, an employee in BACo's Research & Development department, to L.C.F. Blackman, Director of BATCo, stated that "[s]ome people appear to smoke for nicotine, others don't . . . nicotine dependent smokers . . . are more likely to compensate for nicotine than others." 105399692-9693 at 9693 (U.S. 85060).

2220. A July 9, 1984 document by Imperial Tobacco Limited, sister company to B & W, was distributed to various B & W and BATCo employees, including: Blackman; A.M. Heath, BATCo Executive Director of Marketing; Erhard Koehn, BACo Manager of Product Development; Rainier Wernitz, BATCo Manager, Market Research; Tilford Riehl, B & W Division

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Head of Product Development; A. Mellman, B & W Director of Marketing Research; T. Wilson; Brennan; C.I. Ayers; and G.O. Brooks, BATCo scientist. It acknowledged that smokers who switch to low tar brands increase the number and intensity of puffs taken and number of cigarettes smoked to achieve a higher dose of nicotine: "BRANDS SWITCHING DOWN DELIVERY: increase in puffing parameters—increase in numbers of cigs. smoked—more puffs taken means to achieve a higher dose." 536000000-0090 at 0050 (U.S. 22338).

2221. A January 24, 1985 BATCo letter from Charles H. Keith to Lance Reynolds stated:

[H]uman smokers, even though they ingest much more Nicotine and Tar than is indicated by the FTC values, get about the same amount of Tar and one and a half times the Nicotine from Barclay, Carlton and Cambridge . . . [I]t is clearly apparent that the human smokers are ingesting much more nicotine and tar than the nominal values obtained by FTC tests. The human levels are six to eight times higher than the normal values.

621096298-6300 at 6298, 6300 (U.S. 76191).

2222. A BATCo document dated October 12, 1987 sent by M.L. Reynolds to H.F. Dymond (researcher) and H. Ibig, under the heading "Easily Achieved Tar Deliveries from Low Tar Cigarettes," displays a chart depicting the increased tar deliveries of RJR's Now cigarette, and Philip Morris's Merit and Merit Ultra cigarettes, caused by the compensatory behaviors of vent hole blocking, taking more puffs, and taking bigger puffs. This chart shows that these behaviors in combination caused a thirteen-fold increase of tar inhaled for Now cigarettes, a nearly threefold increase for Merit, and a four-fold increase for Merit Ultima. 400015695-5696 at 5696 (U.S. 85063).

2223. A December 21, 1987 BATCo document with subject heading "Notes on Meeting With Dr. Eicher" written by "HFD" (H.F. Dymond, researcher) and sent to Nick Cannar and several B & W and BATCo personnel, stated: "BAT acknowledged the discussion on compensation and described how channel ventilation was an alternative form of ventilation, both systems could be manipulated by a consumer. Other companies were also beginning to acknowledge compensation, but they were reluctant to debate the issue in public." 400015634-5635 at 5634 (U.S. 85064).

2224. A May 6, 1992 BATCo report, titled "Topics In Smoking and Health `Bible'" stated:

[T]he expression of product smoke deliveries in the form of a league table, while understandable, can be misleading. There can be no guarantee that a smoker who switches from one product to another delivering a lower "tar" value will thereby reduce his intake of "tar." He may well alter the way he smokes the second product in some subtle fashion and so adjust his intake of smoke to fit his needs. In this way, he may inadvertently increase his intake of other substances in the smoke. League tables and delivery data on products may, therefore, be misleading to the consumer, who will be unaware of the subconscious ways in which he manipulates his own behaviour ... smokers of higher delivery cigarettes may find that they need to smoke more low delivery cigarettes to achieve the same satisfaction Increasingly smokers will accept the alleged harmfulness of smoking, and while wishing to continue will look for health reassurance brands . . . Smoking behaviour is also of importance.

For example research into the effects of low tar and nicotine cigarettes on case of quitting smoking will be undertaken.

500887584-7709 at 7606-7607, 7614, 7679, 7704 (U.S. 20656).

(5) American Tobacco

2225. A November 11, 1976 report prepared by Fay Ennis Creative Research Services for F. William Free & Company, an advertising agency used by American, demonstrates American's awareness that smokers of low tar cigarettes employed several different methods of smoker compensation. The report summarized focus group sessions relating to low tar cigarettes. When asked about Now and Carlton cigarettes, the panelists "concluded that you would smoke twice as much of this type of cigarette in order to get any satisfaction. One man said that he didn't like the draw on these cigarettes because he had to puff so hard, his throat tickled." When asked to define a low tar cigarette, some panelists stated: "You have to drag on the cigarette `real' hard to get any satisfaction out of it." ATC0137310-7324 at 7319-7320 (U.S. 87916).

(6) Lorillard

2226. A July 16, 1976 Lorillard memorandum from M.S. Ireland to H.J. Minnemeyer on the subject of "Research Proposal—Development of Assay for Free Nicotine" revealed Lorillard's awareness of smoker compensation:

Cigarette sales are made for one reason. The customer is satisfied with the product either from the taste or the physiological satisfaction derived from the smoke. The consensus of opinion derived from a review of the literature on the subject indicates the most probable reason for the addictive properties of the smoke is the nicotine. Indications are that the smoker adjusts his smoking habits to satisfy the desire for nicotine either by frequent or large puffs on the cigarette, or smoking a large number of cigarettes.

00044522-4523 at 4522 (U.S. 22012); 94937037-7038 at 7037 (U.S. 56775).

2227. A December 10, 1976 document by H.S. Tong, which included a review of the scientific literature, reached several conclusions confirming Lorillard's understanding that smokers compensate to receive their desired level of nicotine:

It seems that, within limits, smokers can and do control their nicotine intake from smoke by varying their smoking techniques Smokers were known to smoke more when offered low nicotine cigarettes It would seem desirable to have a low tar cigarette with a nicotine content between the threshold and optimum doses level.

00045061-5071 at 5061-5063, 5068 (U.S. 34210).

2228. A July 30, 1980 Lorillard memorandum, "A Review of Behavioral and Psychopharmacological Factors in Smoking," from S.T. Jones (Product Design), included conclusions by Lorillard personnel based on review of scientific articles in the literature, including the following: "The evidence to date clearly indicates that smokers titrate or regulate their intake of nicotine, e.g. smokers of cigarettes which deliver large amounts of nicotine will adjust—when given low nicotine cigarettes— their smoking to get a larger nicotine dose than the machine determined values indicate." Lorillard also independently acknowledged that, in the 1980s, it knew that smokers of low tar/low nicotine cigarettes would

compensate by altering their smoking habits in order to obtain a higher level of nicotine. 01105000-5021 at 5010 (U.S. 20030); Spears PD, State of Minnesota v. Philip Morris Inc., 9/23/97, 62:29-65:11.

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2229. An August 21, 1984 Lorillard memorandum from E-Chung Wu to W.R. Deaton, reporting on a "puff profile study of 15 brands of cigarettes ... with 5 smoking panel members" acknowledged smoker compensation: "The general trend shows that puff volume increases with the decrease of both TPM or nicotine Obviously, the higher dilution of smoke needs larger volume to compensate for the decrease of the flavor or nicotine." 89213491-3501 at 3491 (U.S. 56466).

3. Defendants Internally Recognized that Smokers Switch to Low Tar/ Light Cigarettes, Rather than Quit Smoking, Because They Believe They Are Less Harmful

2230. The evidence shows that even though low tar smokers may have a greater desire to quit, the misperception of increased safety associated with low tar cigarettes persuades them to avoid quitting. Research shows that most low tar cigarette smokers have made a greater number of quit attempts than smokers of full flavor cigarettes, or were more likely to have considered quitting. (Weinstein WD, 56:21-57:8 (citing Giovino, et al., 1996)).

2231. Many smokers who were concerned about the risks of smoking responded by switching to low tar cigarettes instead of quitting. Burns WD, 46:21-47:9.

2232. "There is profound harm" for people who smoke low tar cigarettes. As Dr. Burns explained:

The vast majority of people who smoke are addicted. They're interested in quitting but are unable to do so To provide smokers an alternative that says you don't have to quit, you can use this other type of cigarette, to intercept them on the way to quitting smoking is a profound harm because they continue to smoke longer than they might have otherwise. Some of those people who switched might have ... been successful in quitting, and when they did that, they would have in actuality reduced their disease risks. And those individuals have been profoundly harmed.

Burns WD, 1:10-15; 12:10-11; 61:14-62:4; Burns TT, 2/15/05, 13311:9-15.

2233. The 2004 Report of the Surgeon General noted that "[r]esearch has demonstrated that with the expectation of reducing risk, many smokers switched to low machine-measured tar/nicotine cigarettes, and may thus have been deterred from quitting". TL0930001-0949 at 0911 (U.S. 88621). NCI Monograph 13 noted that "substantial numbers of smokers" switched to cigarettes with lower machine-measured tar yields "in an effort to reduce their disease risks," and that "[t]he switch to low machine-measured-yield cigarettes with the illusion of risk reduction was, therefore, substituted for a real risk reduction that would have occurred had the smoker quit smoking altogether." DXA0310399-0650 at 0418 (U.S. 58700).

2234. As demonstrated below, Defendants conducted extensive research on quitting to help them identify and understand potential quitters (i.e., smokers who were "concerned" and "uncomfortable" with the fact that they smoke) and design marketing that would dissuade them from quitting. Defendants' internal documents demonstrate their recognition that smokers interested in quitting smoking were instead switching to low tar cigarettes under the mistaken belief that doing so would either help them quit or be better for their health.

2235. For example, a 1987 National Health Interview Survey showed that 44% of current smokers had, at some point, switched to low tar cigarettes to reduce their health risk. Weinstein WD, 53:19-22

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(citing, Giovino, et al., 1996). Correspondingly, another national survey showed that 58% of ultra light smokers and 39% of light smokers chose those cigarettes to reduce their health risks without having to quit. Furthermore, 49% of ultra light smokers and 30% of light smokers did so as a step toward quitting. Weinstein WD, 53:23-54:7 (citing, Kozlowski, Goldberg, et al., 1998). Finally, the 1993 Teenage Attitudes and Practices Survey showed that 21% of light or ultra light cigarette smokers chose those brands because they perceived them to be healthier. Weinstein WD, 54:13-15 (citing Giovino, et al., 1996).

2236. According to Dr. William Farone, former Director of Applied Research at Philip Morris, one reason that low tar cigarettes "are more dangerous" than full-flavor cigarettes is that "they lead people to believe they are [safer] so that they smoke them in manners that cause them to get just as much toxins." Farone WD, 2:2-8; 2:15-19; Farone TT, 10/7/04, 1878:16-22; Farone TT, 10/12/04, 2171:25-2172:8; 2182:11-2190:7.

2237. Dr. Farone explained that:

The problem is that when people see that word "light," it is my opinion that they believe it's safer and, in fact, it isn't, so that's what this is all about . . . they are more dangerous because people are smoking them thinking they are doing themselves some good, they think they are safer ... there is no benefit to a smoker from Marlboro Lights compared to Marlboro. That's the main point. So that makes it more dangerous.

Farone TT, 10/7/04, 1865:9-23.

2238. Smokers of light and ultra light cigarettes are more concerned about the risks of smoking than smokers of full flavor cigarettes. A 1986 CDC control study showed that 85% of those who switched from full flavored cigarettes to light or ultra light cigarettes were concerned about the health risks of smoking, as compared to 70% of full flavor smokers. Weinstein WD, 56:13-20 (citing Giovino, et al., 1996). Ultra light smokers are also more likely to use tar numbers in judging the relative risk of cigarettes. A study showed that 56% of ultra light smokers rely on tar numbers to determine cigarette safety, as compared to 14% of the overall sample. Moreover, 83% of the ultra light smokers believed that switching from a 20 mg to a 5 mg cigarette would significantly reduce health risks, whereas 50% of other smokers shared that same belief. Weinstein WD, 56:3-12 (citing Cohen, J.B., Ch. 9 of Monograph 7, "Consumer/smoker Perceptions of Federal Trade Commission Tar Ratings").

a. Defendants Recognized that Smokers Choose Light/Low Tar Cigarettes for a Perceived Health Benefit

2239. Defendants have stated publicly that they produce low tar cigarettes only to accommodate consumer taste preferences for "lighter," "milder" tasting cigarettes, and that they do not intend their use of brand descriptors or their marketing of low tar cigarettes to imply a less harmful product. See Section V(E)(5), *infra* (discussing Defendants' false statements regarding their low tar cigarette marketing). Contrary to their public statements, however, Defendants' internal marketing documents establish that Defendants have known for decades that even though consumers prefer the taste of

regular cigarettes to low tar cigarettes, they are willing to forgo them and smoke low tar cigarettes, which are less enjoyable and have a less appealing taste, because they believe low tar cigarettes are better for their health.

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(1) Philip Morris

2240. According to Jeanne Bonhomme, Director of Consumer Insights for Philip Morris, in her experience, "there is a general perception among consumers that as you go down in tar, cigarettes have less taste." For this reason, Philip Morris planned to produce a low tar Merit cigarette that tasted like a cigarette with higher tar. A June 30, 1993 document from a Philip Morris USA New Products Meeting, titled "Marlboro New Product Development," stated that the "Project" was to "[b]uild the Merit business by introducing a 3 mg product that tastes like a 5 mg." Philip Morris also planned to "[d]evelop a 6 mg Tar Cigarette with the Sensory Attributes of an 8-9 mg Tar Cigarette." Bonhomme WD, 56:13-57:6; 2041453659-3754 at 3681, 3743 (U.S. 23906); see also 2021323470-3540 at 3478 (U.S. 85034*) (Philip Morris's 1992 R & D Operational Plans for the Product Development Department issued to Cliff Lilly of Philip Morris USA included the following objectives: "Design and develop an 3 mg [Merit] product with the subjective attributes of a 6 mg cigarette . . . Design and develop a 6 mg [Merit] product with the subjective attributes of a[sic] 8 mg cigarette . Develop 6 mg [Marlboro Ultra Lights] line extension . . . providing enhanced subjective quality and Marlboro character . . . LOW TAR HIGH FLAVOR Objective: Develop new technologies which will allow us, within the next two to four years, to produce `Ultra Low' tar, 2 to 4 mg, cigarettes with the sensorial experience of `Lights' or `Full Flavored' cigarettes").

2241. Bonhomme added that "Philip Morris's own marketing research shows that there are consumers who switch to low tar cigarettes even though they do not prefer the taste or flavor, because they believe it is better for them," and that "for those people the reason for switching to a low tar brand is not taste or flavor, but perceived health benefits." Bonhomme admitted that these smokers are willing to sacrifice taste for perceived health benefits. Bonhomme WD, 56:6-12; 60:21-61:1; 63:13-18.

2242. Bonhomme explained that Philip Morris's Merit brand of cigarettes utilized a marketing strategy, titled "Merit Solutions," that was intended to communicate to consumers that "Merit was a solution to the problem of finding a low tar brand with good taste." Bonhomme WD, 59:10-17.

2243. Defendants' own expert, A. Clifton Lilly, Vice President of Technology and Research for Philip Morris, demonstrated that Philip Morris did not intend to market Merit as a "lighter tasting" cigarette, but rather as one that tasted just like a full flavor cigarette, yet with a health benefit. Lilly testified that:

The Merit brand, as I remember, came out in 1976 . . . R & D did a lot of basic research on taking tobacco and actually getting compounds for a flavor system that were the most flavorful ones in smoke, so that the cigarette would be lower tar but taste like it was more like the popular cigarettes, and they were all at that time full flavor.

Lilly PD, Engle v. R.J. Reynolds Tobacco Co., 5/7/98, 34:3-39:2.

2244. An undated Philip Morris document, titled "Background Information on Philip Morris Brands," included "Benefit Statements" for Philip Morris's various "light" brands that revealed Philip Morris's

intent was not to market these cigarettes as "lighter" tasting, but rather as cigarettes that taste like full-flavor cigarettes with the extra purported benefit of low tar and nicotine:

- Marlboro Medium: "gives you a flavorful smoke in a low tar cigarette"

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and "bridges the flavor gap between low tar and full flavor cigarettes."

- Benson & Hedges 100's Lights: "premium tobacco flavor in a satisfying low tar smoke."
- Benson & Hedges 100's Deluxe Ultralights: "only 5 mg tar, yet is rich enough to be called Deluxe ... is an ultra low tar cigarette that gives you satisfying taste ... delivers cool, rich taste with only 5 mg tar."
- Merit: "You'll enjoy low tar and good flavor At only 7 mg tar, Merit delivers the rich flavor of leading cigarettes with twice the tar . . . get rich menthol flavor at only 8 mg tar."
- Merit 100's: "flavor that makes low tar and good taste a reality for 100's smokers."
- Merit Ultra Lights: "cool, flavorful smoke with only 5mg tar."
- Merit Ultra Lights 100's: "an ultra light with flavor."
- Virginia Slims Ultra Lights: "gives flavor and taste—and is an ultra low tar smoke."
- Parliament Lights: "enjoyable taste in a low tar cigarette."

2070143183-4433 at 3209, 3211-3212, 3214-3215, 3219, 3222 (U.S. 40253).

2245. A November 15, 1971 document to James Morgan, former CEO of Philip Morris, from the Marketing Research Department, bearing the letterhead "Philip Morris U.S.A. Inter-Office Correspondence," set forth results of a Philip Morris consumer research study on Marlboro Lights. Under the heading "Likes and Dislikes," the report stated: "Complaints continued to center around taste mentions (23%) and too mild (22%)." 1000292744-2762 at 2745 (U.S. 35205).

2246. According to Morgan, Philip Morris did not intend for the name Marlboro Lights to communicate that it had light or lighter taste:

I have trouble in describing what light taste really means Light taste, first of all, is not a positive attribute if it does mean anything . . . in my judgment, light taste is really a meaningless and nebulous claim ... the bigger proposition is the lower tar and nicotine We are not talking, in my judgment, talking about light ... as a taste. It's not a term that means anything in terms of taste, and the name Marlboro Lights as I said before, a word which we feel has appeal in a different sense than suggesting what the cigarette even tastes like.

Morgan PD, Philip Morris Inc., 10/15/74, 82:25-83:13; 85:9-15; 85:17-86:4.

2247. Around the time of the launch of Marlboro Lights in 1974, a marketing dilemma existed for Philip Morris: on the one hand, the fact that a cigarette had a "lighter taste" was a negative limitation in the minds of consumers that made the cigarettes more difficult to sell, but, on the other hand, the term "light" also conveyed the beneficial message of low tar. Morgan PD, Price, 6/5/02, 39:19-25, 40:2-25, 41:2.

2248. Philip Morris's Marketing and Research and Development departments held regularly scheduled meetings where they discussed, among other things, how to increase the market for low tar cigarettes through research and development. Many discussions focused on the poor taste of low tar cigarettes:

marketing ... kept saying people don't like the taste of a low tar cigarette. They are finding it unsatisfactory What can we do to develop a low tar cigarette that really tastes good. That to me looks like the great market opportunity. I remember lots of discussions about that.

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Morgan PD, Price, 6/5/02, 95:13-25, 96:2-25, 97:2-25, 98:2-25, 99:2-25.

2249. According to Ellen Merlo, then Senior Vice President of Corporate Affairs at Philip Morris USA, "there was a general perception that low tar cigarettes did not taste as good as full flavor cigarettes." Merlo added that Philip Morris's Merit cigarette "was the first free standing cigarette entry in the light category that was positioned as tasting good." Merlo PD, Price v. Philip Morris, 10/2/02, 152:12-153:10.

2250. An October 1975 Philip Morris USA Special Report distributed widely throughout the Research Center, titled "Low Delivery Cigarettes and Increased Nicotine/Tar Ratios, a Replication," urged development of a "low delivery cigarette that will both look and taste like a regular filter cigarette and thus will appeal to current regular filter smokers." The document further stated:

If a low delivery cigarette with impact and flavor were developed, it may cause the segment of current regular filter smokers who are concerned about their health but demand a flavorful cigarette to voluntarily switch to the low delivery cigarette.... Furthermore, some portion of current low delivery smokers may desire to switch to a more flavorful cigarette and others may follow as consumer experience results in changing the image of low delivery cigarettes so that smokers believe a flavorful cigarette can really be 'healthy'.

1003288950-8967 at 8951, 8954, 8952 (U.S. 20166).

2251. Draft remarks of the Philip Morris Merit cigarette team, dated January 7, 1976, acknowledged explicitly that low tar cigarettes appealed to smokers because of their purported reduced harmfulness:

Undoubtedly because of the health allegations against cigarettes, many smokers have clearly wanted cigarettes that deliver less and less tar... [D]espite the intense promotion efforts and the strong interest among smokers, ... [t]hey have been tried and rejected by the overwhelming majority of smokers. Obviously, there has been a conflict between the desire for low tar and the desire for the rich, satisfying taste that until now has been associated with higher tar delivery.

PM3000136418-6422 at 6420-6421 (U.S. 61504).

2252. A 1979 Philip Morris Merit advertisement, titled "Merit Taste Eases Low Tar Decision," appeared in national magazines, stating:

"Enriched Flavor" tobacco proving real alternative to high tar smoking Confirmed: Majority of high tar smokers rate MERIT taste equal to—or better than—leading high tar cigarettes tested! Cigarettes having up to twice the tar. [Merit's] ability to satisfy over long periods of time could be the

most important evidence to date that MERIT science has produced what it claims: The first real alternative for high tar smokers.

1002325022-5022 (U.S. 21510) (emphasis in original).

2253. A January 1979 study prepared for Philip Morris by Goldstein/Krall Marketing Resources, Inc., discusses consumers' perception of light cigarettes: "There appears to be a concept involved that might be called 'limiting.' They have moved to limit their tar and nicotine intake. At the same time they have accepted a limit on taste." 2040066740-6766 at 6755 (U.S. 20435).

2254. According to Nancy Lund, Senior Vice President of Marketing for Philip Morris, when light cigarettes were first introduced, their largest drawback was

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that consumers disliked their taste. In fact, nine out of ten consumers reported dissatisfaction with the taste of light/low tar cigarettes. She acknowledged that smokers were buying them, nonetheless, because they were perceived to be less harmful. An April 20, 1987 memorandum on Leo Burnett letterhead from Elinor Bowen of Leo Burnett and Carolyn Levy of Philip Morris addressed to Nancy Brennan (later Nancy Brennan-Lund) of Philip Morris, among others, commented on light cigarettes generally: "Thus far in the cigarette category, lightness has been associated with low tar or ultra low tar products which represent, for many smokers, an absence of taste and an avoidance of problems associated with smoking." Brennan-Lund PD, Price, 9/20/02, 140:14-144:11, 186:12-189:19; 2040904809-4811 at 4809 (U.S. 85035).

2255. A Philip Morris document circa 1979 prepared by Judy John and Helmut Wakeham, titled "Breakthrough of the High Taste, Low Tar Cigarette: A Case History of Innovation," stated that although consumer demand for low tar cigarettes was spurred by indications that cigarette smoking caused disease in humans, "market research analysis ha[d] shown that nine out of ten smokers had tried lowtar brands, but had failed to accept them as their choice of cigarette." The document also stated: "Apparently not enough smokers could adapt to the diminished 'flavor' of the highly filtered low-tar cigarettes available at that time." 1000208603-8625 at 8605 (U.S. 85010) (internal citation omitted).

2256. A September 1991 Philip Morris document, titled "Background Information on PM Brands," stated that, notwithstanding the introduction of Marlboro Lights in 1972 and the introduction of several variations on Marlboro Lights in 1978, 1980 and 1984, when Marlboro Medium was introduced in 1991, "consumers [were] still looking for a satisfying low tar cigarette with flavor." Marlboro Medium apparently "was successful in bridging the flavor gap between full flavor Marlboro and Marlboro Lights." 2070143183-4433 at 3206 (U.S. 40253).

2257. A June 1, 1994 document prepared for Philip Morris by Kane, Bortree & Associates, Inc., in its "Conclusions Product/Positionings" section, reported that Merit's "We Lowered The Tar ... But Kept The Taste" slogan "generated interest among male Low Tar Seekers because of the fact that they are committed to lowering their tar consumption." The concept of lowering the tar, but keeping the taste, was referred to as a "product improvement." 2045629674-9712 at 9696 (U.S. 88630).

2258. A March 26, 1996 memorandum from Shari Teitelbaum, to Jodi Sansone, then Brand Manager for Merit cigarettes, accompanying a consumer research report commissioned by Philip Morris,

explained that once consumers made the decision to switch down to the category of low tar cigarettes based on health concerns, they then select their low tar brand within that category based on taste preference. Under the heading "Reasons for and Perceived Benefits of Smoking Lowest Brands," the document stated: "Although many of these smokers made the decision to go lighter based on perceived health concerns, taste seemed the major reason to choose or stay within a particular brand." 2045628312-8328 at 8312, 8321 (U.S. 22217).

2259. A February 9, 1998 draft research report prepared for Philip Morris by the research firm Kane, Bortree & Associates, titled "Merit Strategic Revitalization Plan, Stage I Learnings," analyzed ways to "build Merit's share of the low tar segment." The report labeled as "Taste

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Compromisers" low tar smokers who find the taste of light cigarettes unsatisfying but feel comfortable smoking them because of perceived health benefits. An example of their thought process is the following:

I feel that I can really taste the difference between cigarettes. I try to smoke the best tasting light since I know that smoking a light is better for me. I feel that smoking a light is a huge tradeoff but I know that it's worth it. I much prefer full flavor taste and do not think it's too strong. I choose my brand on taste. I feel like I am on a permanent "diet" because I smoke a light.

The report listed Winston Lights, Marlboro Lights, and Camel Lights as brands for taste compromisers. 2063687348-7527 at 7362, 7357 (U.S. 39820*); Bonhomme WD, 45:1-22; see also, 2063686921-6942 at 6924 (U.S. 88629) (indicating that a goal of Kane Bortree was to "[i]dentify marketable positioning opportunity(ies) for revitalizing Merit via low tar technology (3 mg tar cigarette that smokes like a 5 mg tar or possibly higher levels)").

2260. Under the heading "Consumer Learnings," the February 1998 draft report noted that "Merit can secondarily target Taste Compromisers by promoting taste," and under the heading "Preliminary Recommendations," the report recommended that Merit "[p]romote the benefits of light flavor rather than 'apologizing' for the fact that it is less than full flavor." Under the heading "Positioning Learnings" and the subheading "Exploratory Positionings," the report stated: "'Low tar' should not be highlighted, but may be needed as reassurance to more health conscious smokers." 2063687348-7527 at 7352, 7354, 7376 (U.S. 39820*).

2261. An October 5, 1998 internal Philip Morris presentation regarding Philip Morris's premium cigarette brands discussed the Merit brand's positioning. Under the heading "Merit—Brand Essence," the document stated that "[s]ince the brand's introduction twenty-two years ago, the core Merit proposition has been low tar with satisfying good taste. Merit is the brand that understands the desire to seek a lower tar alternative." Under the heading "Merit—Brand Strategy," the document said that Merit's strategy was to "Convince: Smokers who want to switch to a low tar alternative, but won't sacrifice taste completely, That: With Merit, you can switch down to lower tar and still enjoy smoking Because: Merit delivers satisfying taste at every level of low tar." 2063690668-0687 at 0675-76 (U.S. 39825).

(2) R.J. Reynolds

2262. An April 1974 Qualitative Consumer Evaluation for four Winston Lights Positionings noted that those who liked Winston Lights believed that a low tar cigarette was a "'safe' cigarette." Consumers were excited by the possibility of having full flavor and low tar simultaneously because it offered "a 'safe' cigarette with a taste if not exactly the same at least similar to their current brand." The report stated that "[t]hey were generally skeptical that a less harmful cigarette could give them what they want in a cigarette—taste—or would the taste be sacrificed in some way." Communications with smokers indicated that the target audience was "concerned about the harmful effects of smoking and would be glad to switch to a brand which could deliver good taste with low tar and nicotine." 502041366-1415 at 1373, 1383, 1385-1386 (U.S. 22147).

2263. A 1975 report, titled "An Evaluation of the 120MM Market and Its Potential for RJR," recognized that "smokers of High Filtration brands . . . feel the low tar and nicotine brands are much safer and much less of a health hazard. They are readily willing to sacrifice taste for a 'longer

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life.'" 500671364-1454 at 1436-1437 (U.S. 22158).

2264. A circa 1976 Doral Brand Performance report noted, in a section titled "Other Brand Measurements Psychographics," that with respect to lifestyle, Doral smokers (relative to smokers overall) were "more conscious and anxious about health" and, with respect to attitudes and needs, would "sacrifice taste to get lowest tar' and nicotine." 501229581-9590 at 9589 (U.S. 22118).

2265. A 1979 study related to Camel Lights indicates that the marketing campaign stressed that Camel Lights provided a product to individuals who wanted to smoke a low tar cigarette, but did not want to compromise on "rich taste and smoking satisfaction." The message itself was "a specific low tar message." 500731672-1707 (U.S. 22168).

2266. A June 21, 1982 Product Research Report on Non-Menthol Ultra Low Tar Consumer Probes, published by the RJR Marketing Development Department, classified ultra low tar non-menthol smokers into two groups: (1) smokers who are extremely concerned about tar levels and (2) smokers who are moderately concerned about tar levels. The report went on to explain that "extremely concerned" smokers "primarily seek products that are lowest in tar. These smokers are willing to trade-off such smoking benefits as strength, taste/flavor and ease of draw for brands which may not deliver these benefits but which are lowest in tar." The report also explained that as compared to smokers of higher tar brands, "respondents generally characterized ULT cigarettes as having a harder draw, reduced smoke density—which they expressed as 'smoking air,' less taste/strength/flavor, and less smoking sensation." 503394459-4485 at 4460-4461, 4463, 4467 (U.S. 85036); Schindler WD, 75:14-76:16.

2267. A 1984 Vantage Family "Moderation" Situation Analysis explained that "relative to other segments, 'Moderator' smokers realize there are both positive and negative aspects of smoking, resulting in a desire to resolve the conflict by compromising/moderating on their brand choice." This process was depicted as adding the positives of smoking (personal ritual, anxiety reduction, social confidence) to the negatives of smoking (alleged health hazards and smoker image), compromising on the idea of taste and satisfaction with low tar products, and the image that they are "doing something positive." 502118237-8267 at 8241 (U.S. 22119).

2268. A December 16, 1988 RJR marketing presentation stated that: "For a successful product the perceived health benefit must balance any sacrifice that must be made in terms of taste, satisfaction and traditional smoking pleasures." 650900829-0849 at 0831 (U.S. 20951).

2269. In 1990, RJR undertook a marketing campaign promoting the fact that Now cigarettes had the lowest tar and nicotine levels of any product in the industry. The campaign focused solely on the fact of Now's "lowest" tar and nicotine levels not on taste. Some of the advertisements implicitly admitted that good "flavor" or "taste" was intuitively less likely in a low tar cigarette. For example, one advertisement asked, "Merit Ultra Lights Smokers: Is there a way to get 60% less tar and nicotine and still get flavor in a cigarette? NOW is the way." Similarly, another advertisement asked, "Benson & Hedges Deluxe Ultra Lights Smokers: Can you get 50% less tar and nicotine and still get taste in a cigarette? NOW you can." Still another advertisement asked, "True Smokers: How can you get 67% less tar and nicotine and still get real cigarette taste? NOW is how." Finally, an advertisement in this campaign asked, "Carlton

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Smokers: Can a cigarette have just 2 mgs. of tar and still be satisfying to smoke? NOW can." Along those same lines, one of the advertisements indicated, "THE LOWEST IN TAR & NICOTINE. Try Now. Surprisingly good taste." 2070717114-7436 at 7334, 7336, 7408, 7410, 7432 (U.S. 22172*).

2270. A May 1991 consumer research report prepared for RJR, titled "R.J. Reynolds Project XB," stated: "Most respondents are interested in a new cigarette that could deliver the great taste and easy draw of current brands, with low tar equivalent to Carlton or NOW. They recognize Carlton and NOW are very low tar, but they perceive the taste and draw to be disappointing." The document further stated that "[respondents suspect there is a correlation between reducing the amount of tar and weakening the taste." As a "positive" of a proposed marketing concept, the document stated: "There is interest in an extra low tar cigarette that tastes great and has an easy draw. There is a consensus a lower tar product would be better for them." As a "positive" of a different proposed marketing concept, the document stated: "Respondents, especially women, feel this cigarette could alleviate their concerns about tar levels. They expect the cigarette to be better for them." 514343517-3566 at 3559 (U.S. 51848).

(3) Brown & Williamson

2271. According to Sharon Smith, former B & W Director of Marketing Services and Operations, internal B & W research documents "indicate that some smokers are willing to smoke low tar cigarettes, even though these smokers feel they don't taste as good." Smith WD, 52:7-16, 55:16-22.

2272. A January 1977 report prepared for B & W by Post Keyes Gardner, Inc., stated that "health" was the most important driver of consumer trends, compared to mildness, which would not, of itself, cause smokers to switch brands:

"Health": In our opinion, this is by far the most important factor and trend in the market. All major shifts in smoking habits seem to be a function of "health" concerns, as they pose a deep psychological question that every smoker must somehow answer. The manifestation of "health" concerns can be seen in the filter revolution of the 1950's, the emergence of menthol, as well as new hifi's in the 1960's and today Mildness: This is more or less a taste experience. It is best characterized by the acceptance of filter cigarettes—not the reason for them. In our view, mildness is not a dominant trend, and thus does not cause major shifts in smoking habits It, therefore, is unlikely that smokers would switch to milder

cigarettes primarily because they are milder. We suspect that the deeper concern of "health" is the dominant motivator to mildness Some smokers will seek justification (rationalization) for staying with a full taste brand, others will move on to the continuing compromise of less satisfaction while continuing to smoke [by switching to low tar cigarettes] ... the latest compromise between taste and tar.

Sharon Smith admitted that this document shows that some smokers "were choosing their cigarette not due to a preference for a `milder' tasting cigarette, but out of health concerns." 776158413-8426 at 8418, 8419, 8425 (U.S. 22339); Smith WD, 54:21-56:15.

2273. A July 25, 1977 B & W internal marketing study stated: "It must be assumed that Full Taste smokers come down to `low tar' expecting less taste ... [t]hey are willing to compromise taste expectations for health reassurance." 775036039-6067

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at 6052 (U.S. 21053); Ivey WD, 57:11-58:11.

2274. An October 1979 B & W "History and Key Trends in the U.S. Cigarette Market" compiled by E.T. Parrack, Vice President of Brand Management, stated that some of the then "new products" such as Merit and Real "seem to be capable of attracting some smokers from the Full Taste segment, thus drastically changing the terms of the basic tradeoff between taste and low tar in effect for 25 years." The paper added:

Viceroy [is] perceived as smooth and perhaps mellow, but it is not significantly weak, mild, bland or light as are the Hi-Fi brands STRATEGIC ALTERNATIVE Increase Viceroy share of market by positioning Viceroy between full-filter flavor and Hi-Fi as the ideal compromise between the need for full taste and the need for low tar.

The document added that some smokers "have struck a compromise between taste/satisfaction and personal concerns. They smoke low `tar' line extensions hoping for the full taste of high `tar' brands and the relative benefits of lower `tar.'" 670624932-5364 at 4942, 5102, 5157, 5240 (U.S. 53869). Again, Sharon Smith admitted that "this document indicates that Brown & Williamson was aware that some smokers smoke lower tar cigarettes even though they prefer the taste of higher tar cigarettes because they wish to lower their tar intake." Smith WD, 52:17-53:21.

2275. A March 12, 1981 B & W memorandum from Sue Finley to B.L. McCafferty, titled "Apollo Strategy Recommendation," revealed that consumers were smoking ultra low tar cigarettes because they wanted to lower their tar intake, despite the fact that they disliked the taste:

In 1980 the number of ultra low "tar" (1-6 mg `tar') cigarette brand styles on the market went from 24 to 38 and the segment's share grew from 6.28% in 1979 to 8.73% in the 4th Quarter of 1980 The segment's growth has been generated primarily by smokers' "tar" concerns, as most of the ULT products have no other perceivable consumer benefits. The products are considered extremely hard to draw and weak tasting. In qualitative research, smokers have said that drawing on ultra low products could "cause hernias" and that they taste like "sucking straws" and "there's nothing to them" While cigarette marketing has historically been image oriented, initial ultra low "tar" cigarette advertising was very clinical. All ULT brands advertised extremely low "tar" with little, if any, taste support or smoker imagery.

Discussing the marketing for the proposed new ultra low tar cigarette, APOLLO, the Memorandum stated:

Smokers are subjected to relentless pressures to quit smoking or reduce "tar." They continue to smoke because they derive pleasure from the experience and, while they may trade down in "tar," they view "tar" reductions as pleasure reductions. To make the switch to low "tar" a more satisfying experience, APOLLO should be presented in a positive, warm and enjoyable manner.

Sharon Smith explained that "this document states that people were smoking ultra lights because they wanted to lower their tar intake, despite the fact that they viewed it as a pleasure reduction." 670635571-5593 at 5571, 5576 (U.S. 85037).

2276. An April 1985 consumer research report prepared for B & W by ADI Research, Inc., titled "Brown & Williamson Tobacco Corporation Light and Ultra Light Smokers Concept Reaction Study" stated: "The light and ultra light categories are problematic to consumers because

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of problems with taste and inhaling and drawing. There is overwhelming agreement by all groups." The report discussed how Barclay's position was succeeding at getting consumers to believe that Barclay provided a solution to taste and draw problems. The report also noted, however, that "[t]hose in the minority that did not perceive a solution thought there would be drawbacks. If Barclay is better tasting and drawing, then it would have to be higher in tar and nicotine, hence, less safe and more harmful." 4656266454722 at 6647,6656-6657 (U.S. 87911).

2277. A B & W document circa 1996-1997, titled "Carlton Creative Plans," stated that "CARLTON is the trademark of choice for smokers who have made an intellectual decision to seek the 'lowest' in tar and nicotine without unduly compromising taste." Carlton's "TARGET AUDIENCE" was described as: "Smokers who want to cut down in tar and nicotine as much as possible and are willing to sacrifice some product performance." The first "Primary" trait of the target audience was "Health conscious." The then-current brand positioning of Carlton as "The Lowest" was said to "satisf[y] the brand positioning." 176020783-0800 at 0783-0786 (U.S. 23351).

2278. A B & W document, titled "B & W 1997-1999 Plan," indicated that consumers "switch down" in tar primarily for health reasons, and that this switch down in tar represents a sacrifice in terms of cigarette taste. "Carlton Target Markets" were identified as

Smokers Who Want To Cut Down In Tar And Nicotine As Much As Possible And Are Willing To Sacrifice Some Product Performance-Primary—health conscious CARLTON Is The Trademark Of Choice For Smokers Who Have Made An Intellectual Decision To Seek The 'Lowest' In Tar And Nicotine Without Unduly Compromising Taste.

The document even discussed plans to reduce the emphasis on taste indicated by Carlton packaging to ensure that the message that Carlton had lowest tar and nicotine was conveyed: "CARLTON's Packaging May Contribute To The Low Awareness Of The 'Lowest' Tar Positioning By Communicating A Higher Level Of Tar And Taste Than The Product Actually Delivers." 462224560-4766 at 4706, 4709-4711 (U.S. 22085) (emphasis in original).

2279. A B & W document faxed from "Marketing Operations" on January 20, 1999, titled "Current Trends in Lights and Ultra Lights," stated under the heading "Learnings": "Consumers were ready for low tar before Marlboro Lights. Health concerns . . . First low tar cigarettes failed due to: Lack of flavor and smoking satisfaction. . . Smokability is critical for success." 430403186-3194 at 3193-3194 (U.S. 22084); Ivey WD, 58:11-22.

(4) BATCo

2280. A September 1992 BATCo Business Review prepared by Norma Simamane, BATCo Lights Project Manager, stated, regarding low tar cigarettes, that consumers felt that "[t]he lower the [tar and nicotine] numbers, the higher the sacrifice on smoking pleasure." Lights represented "a total compromise," and negative aspects included: "It's like smoking hot air" and "Deprive you of a true smoking experience." Lights were perceived as "for people who ... want to quit but can not." The aspects of the "Inadequate product performance" of low tar cigarettes were: "lack of satisfaction/not satisfying"; "lack of smoking quality"; "poor quality of flavor"; "not strong enough"; and "need to smoke more." 321683062-3099 at 3087,3090 (U.S. 28586).

2281. A BATCo document circa 1996 titled "Lights Segment Project Consumer Page 486

Insight Into Smoking Lights" stated, under the heading "Benefits of Smoking," that "Might smokers criticized Ultra's as bad tasting . . . but accept this lost taste characteristic." The document further stated "light cigarettes (especially ultra) = pleasure sacrifice." The document further stated that "Ultra smokers find it necessary to explain to others and themselves why they consume a product that provides hardly any pleasure (taste)" which led to the "negative cliché" of a "weak willed addict." The document stated that to counter this, "we need to reassure light/ultra smokers that it is okay to smoke lights through communication." 321546706-6724 at 6707, 6708, 6709 (U.S. 22052).

2282. A BATCo document, titled "Barclay Business Review 1996," discussed low tar smoker motivation:

The results of the 1MG smokers motivations study in Belgium show that the key drivers to the [ultra light] segment are health concern and peer/family pressure. Consumers expect a reduction of negative aspects . . . As amount of taste is the main consumer indicator for strength, 1mg. products are expected to have the least taste among all cigarettes.

700767443-7457 at 7448 (U.S. 22123).

2283. A BATCo document, titled "Firefish Kent in Dublin Qualitative Research Debrief July 2000," concluded that, with respect to Kent's charcoal filter, consumers found communications providing health reassurance "more appealing" than communications about taste: "Kent Taste System! The Charcoal Filter communication was appreciated . . . However, they felt the emphasis should be on Filter— rather than taste—help filtering out the 'crap' was more appealing than advantages in taste." 321626872-6906 at 6901 (U.S. 22059).

2284. In a document, titled "What is a Light Cigarette," dated September 29, 1998, BATCo scientist David Creighton described two "main types of Lights smokers[:] Those who start smoking Lights . . . and those who have been smoking a full flavour product and wish to switch down to a Lights." Creighton

explicitly acknowledged that Lights smokers who "switch down" do so because they believe it is a "conscious . . . exchange" of taste for "the reassurance of the lower tar delivery":

[T]he down switcher, who has been used to a higher taste level[,] would prefer to maintain as much taste as possible with the reassurance of the lower tar delivery of a Lights The down switcher makes a conscious decision to give up some taste satisfaction in exchange for the lower delivery potential.

770009958-9964 at 9962 (U.S. 78253).

2285. A January 15, 2001 BATCo document written by Steven Coburn, titled "Project Balcony," which referenced Santa Monica, California marketing studies related to proposed campaigns, reported that smokers prefer the taste of higher tar cigarettes, but smoke lower tar cigarettes because they believe lower tar cigarettes are less harmful: "[L]ights don't satisfy as much as a heavier cig when trading down . . . less tar less nic—less harmful." 325239017-9018 at 9017 (U.S. 22082). A January 17, 2001 document with the same author and title that also referenced Santa Monica smokers, stated under the heading "Benefit": "Has carcinogens of a lights but taste of full flavor[.] May be not as harmful—which is why some people smoke lights." 325239023-9024 at 9023 (U.S. 22082). An additional document with the same date, title, and author, referencing Santa Monica smokers stated: "Benefit . . . Lights that smoke like a full flavor— not sacrificing anything[.] Lights with a full flavour—important—lights better for you but still taste like a cig." 3252390259026 at 9026 (U.S. 22082).

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(5) American Tobacco

2286. A 1967 Annual Report prepared by American, describing American's Carlton cigarettes, defined a "light cigarette" as "one that is low in `tar' and nicotine yield," and made no mention of any particular taste characteristics. MNAT00029170-9201 at 9176 (U.S. 21222).

2287. A March 2, 1976 American document, titled "Background and Product Positioning Recommendation Project LOTC," predicted that:

[T]he most significant growth will take place in the "middle ground" where taste claims prevail, yet where the perception of a "health benefit" is still strong. In other words a compromise between low-tar and taste (which is unmistakable to consumers) may not represent as traumatic a change for full flavor smokers as a change to "super" low tar.

ATC0494235-4235 (U.S. 87912).

2288. A January 1984 document from American Tobacco's files prepared by Andrew Thurm Associates titled "'NO ADDITIVES' CONCEPT TEST" concludes that low tar cigarettes are associated with weak taste and that Carlton cigarettes have a weak, negative taste perception with consumers:

"Carlton ... shows traces of an additional impediment—weak taste perceptions .. Carlton's weak taste image acts as a secondary impediment... . In a certain sense, being low in tar peripherally suggests a flavor identity because of its connotations to mildness at the expense of taste strength."

970384072-4111 at 4076 4078 (U.S. 85121).

2289. A February 29, 1988 American Tobacco memorandum from Richard E. Smith, Director of Brand Management, to K.P. Noone, Product Manager, stated:

If the switching motivation is better taste, [smokers] ... will certainly not switch to Carlton, a brand which their experience has often taught them is lower taste [M]ost smokers will continue to seek lower tar They have demonstrated a disciplined willingness to sacrifice taste.... Carlton brings less than nothing to the better/stronger tasting party.

991216857-6858 (U.S. 85115).

2290. A February 29, 1988 American Tobacco memorandum from J.M. Murray, Assistant Product Manager, to T.M. Keane, Senior Product Manager, stated:

The Carlton and Now Groups almost unanimously cited "Lowest in Tar" as the single most important motivating factor in brand selection. . . . Importantly, the 0-3 mg. groups identify "Lowest" as the driving force—they seem to have been prepared to make a taste compromise. There is nothing to indicate that [ultra light smokers] won't become available to Carlton. At present, they aren't ready to make a taste compromise As these people become prepared to step down, they will be ready to give up some level of taste and seek the "Lowest in Tar" (e.g. Carlton or Now) . . . present Carlton smokers ... have already made the taste compromise and focus primarily on "Lowest" In conclusion, I believe we should focus our efforts on developing suitable advertisements which single mindedly communicate our "Lowest" positioning.

980355176-5177 (U.S. 85122).

(6) Lorillard

2291. A December 1976 report prepared for Lorillard by the Nowland Organization, Inc., stated: "Those who do not now smoke SHF [super-high filtration] cigarettes perceive low tar and nicotine cigarettes in very much the same way as do current smokers—i.e., as 'better for you' but not as enjoyable." 84053616-3706 at 3638 (U.S. 55997).

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2292. A June 1978 Report prepared for Lorillard by Foote, Cone & Belding Advertising, Inc., "to assist Lorillard in understanding the ... attitudes of reducedtar smokers and their motivations in selecting brands" relayed smokers' beliefs that lower tar cigarettes had an unsatisfying lack of taste, and indicated that a low tar cigarette "with good taste" had not yet been developed, stating:

The major problem with [ultra low tar] brands was decided lack of taste/smoking impact. "Sucking on a straw in an empty glass -nothing" was a typical reference to such brands. In point of fact, this was probably very close to the truth.... There is every reason to believe that ultimate technological breakthroughs will yield a tobacco product that is low in tar, with good taste. In that event, ultra low-tar products will serve as a viable net for all smokers who desire reduced tar plus the satisfaction of good taste.

03297227-7249 at 7229, 7233, 7246 (U.S. 88631).

2293. This document, discussing one of Lorillard's competitors' brands, added:

Carlton's success was all the more surprising in light of the fact that it was totally unable to offer any taste benefits to the consumers. Apparently, there existed a strong need among a sub-section of reduced-tar smokers for a cigarette that was 'as low as you can go' in its tar and nicotine levels.

03297227-7249 at 7240 (U.S. 88631).

b. Defendants Internally Recognized that Smokers Rely on the Claims Made for Low Tar/Light Cigarettes as an Excuse/ Rationale for Not Quitting Smoking

(1) Tobacco Institute

2294. A May 1978 Tobacco Institute document, titled "A Study of Public Attitudes Toward Cigarette Smoking and the Tobacco Industry in 1978 Volume I," prepared for the Tobacco Institute by the Roper Organization stated that

low tar cigarette smokers ... are potential cigarette quitters . And more of them than the average have tried to quit smoking. Since low tar smokers are an expanding share of the market, their greater desire to quit smoking poses a special problem for the cigarette industry.

501565967-6019 at 6008 (U.S. 21866).

(2) Philip Morris

2295. Philip Morris conducted research on former smokers to assist it in marketing purportedly less harmful cigarettes to draw them back into the market and to dissuade potential quitters from actually quitting. According to Carolyn Levy, who worked as a research scientist for Philip Morris in its Behavioral Research Group from 1975-1980 and as the Assistant Director and later Director of Consumer Research from 1986-1991, when she was in the Consumer Research Department, she "performed research on quitting on behalf of Philip Morris," and when she was in the Behavioral Research Department in the late 1970s, "[q]uitting was also a subject of interest and research to Philip Morris."

2296. A report titled "Exit-Brand Cigarettes: A Study of Ex-Smokers," written by F.J. Ryan and approved by Dr. William Dunn, dated March 1978 and distributed to certain Philip Morris employees, including Levy, stated: "If the industry's introduction of acceptable low-nicotine products does make it easier for dedicated smokers to quit, then the wisdom of the introduction is open to debate." The report further stated that "experience in dealing

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with 'quitters' suggests that most people who quit smoking will resume after a while. Hunt and Matarazzo show data suggesting that 50% of quitters resume smoking within 3 months and 70% resume within a year." Levy said that she was "aware when [she was] studying quitters that most quitters resume smoking." Levy WD, 26:1-5, 26:20-28:10; 1000368057-8081 at 8060, 8066 (U.S. 20098*) (emphasis in original).

2297. Levy stated that Philip Morris was "studying the factors that influence quitting," including whether "people quit because of health concerns," so that Philip Morris could "design products or line extensions of existing brands that addressed those factors." Levy testified that "No the extent we determined that people quit because of health concerns, that would be very important in reaffirming Philip Morris' commitment to develop cigarettes with lower harm or risk." Asked if the purpose was

"[s]o that people would keep smoking Philip Morris cigarettes rather than quitting," Levy answered: "Yes, if Philip Morris could design new products to address those concerns." Levy WD, 31:9-22.

2298. An August 14, 1978 consumer research report prepared for Philip Morris by Wells, Rich, Greene, Inc. regarding Benson & Hedges stated:

Those who are currently smoking "Lights" do so because " ... they are better for you . ." than full flavor cigarettes. Although some experience that they actually smoke more Lights, they perceive that they are cutting down and it is an alternative to quitting—which most cannot accomplish.

1004888470-8484 at 8480 (U.S. 85009).

2299. A January 1979 study prepared for Philip Morris stated:

[W]ith respect to ultra low tar brands there appear to be particular additional motivations for smoking this type of cigarette . . . [h]ealth problem forcing a change to a safer cigarette (as an alternative to not being able to quit) . . . [p]eer and family pressure to smoke a safer cigarette (as an alternative to not being able to stop smoking) Characteristics of ultra low tar smokers were: people who want to quit In point of fact, smoking an ultra low tar cigarette seems to relieve some of the guilt of smoking and provide an excuse not to quit. All of these smokers expressed an awareness of a health hazard from smoking, but felt that they had alleviated some of this hazard by smoking an ultra low tar brand. They described these cigarettes as 'safer' With these justifications, there may be less of a compulsion to quit smoking

2040066740-6766 at 6747, 6751-52, 6754, 6755 (U.S. 20435).

2300. A March 1979 report prepared for Philip Morris, titled "A Study of Smokers' Habits and Attitudes With Special Emphasis on Low Tar and Menthol Cigarettes," stated:

The percentage of adults who smoke has stabilized for the first time since 1965— at 34%. This could well be due to the greater perceived safety of low tar cigarettes and their resultant neutralization of the health threat The number of cigarettes smoked per day per smoker continues to climb, in part at least because low tar cigarettes seem to cause people to increase the number of cigarettes they smoke.

2049455309-5318 at 5313 (U.S. 22218); Bonhomme WD, 25:15-26:1, 46:19-47:7.

2301. In a September 28, 1987 interoffice memorandum written by Levy and sent to David Dangoor, Executive Vice President at Philip Morris, titled "Critical Consumer Research Issues," Levy outlined what she called "the most important consumer-related

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questions which should be addressed in 1988." This document contained "information about some of the types of research that Philip Morris planned to conduct in the upcoming year." Among the questions Levy posed in the memorandum were: "Can we determine the relative importance of various factors which influence quitting?"; "What are the factors which influence brand choice of smokers reentering the market? Can we capitalize on these?"; and "Which new product options will ... appeal to former smokers?" 2080009516-9522 at 9517, 9520 (U.S. 88155) (emphasis in original); Levy WD, 28:20-30:8, 31:5-22.

2302. Philip Morris conducted a "major study" on quitting in 1988, titled "Critical Issues -1988 Progress Report," which Levy described in a September 26, 1988 memorandum she sent to John Zoler, then Director of Market Research. Under the heading "Smoker Dynamics," Levy wrote: "Conducted a major study on quitting showing: demographics of quitters, quitting by brand, reasons for quitting, methods used to quit, substitutes used for cigarettes." There were 506 people surveyed in the Philip Morris study, and "[t]he research results indicated that the number one reason for people quitting smoking was health concerns." Levy WD, 32:2-33:8; 2080009523-9529 at 9524 (U.S. 88156).

2303. A June 20, 1988 memorandum on Philip Morris USA letterhead from consumer researcher Jan Jones to Dr. Ed Gee, titled "Statement of Position on the Social Pressures Construct," discussed Philip Morris's goal of introducing a "socially acceptable cigarette" that "could capture the trend-setters who might find such a product preferred over current cigarettes, be a welcomed alternative to quitting, and might attract new smokers who would not otherwise choose to become product users." The memorandum further stated:

With the recent attrition rate of smokers, attaining "new" smokers is no longer synonymous with capturing young smokers. We already have Marlboro as the brand of choice for young smokers entering the market. We do not have a product that meets the needs [sic] of the growing population of exsmokers. Many of these ex-smokers will resume smoking, and the product that they choose could cause a swing in market share. These quitters (and those who are soon to become quitters) are dissatisfied with certain aspects of a product that previously met their needs These consumers have not yet as a group found a satisfactory replacement for their previous product—a textbook example of a market opportunity.

2050801835-1853 at 1845 (U.S. 38763); Bonhomme TT, 2/10/05, 12936:6-12939:7.

2304. A March 1993 Philip Morris document, titled "Quitting Dynamics," showed statistics from "Smoker Tracking" that indicated that more Low Tar smokers did not try to quit (53.5%) compared to Full Flavor smokers (43.2%). 2062362453-2474 at 2473 (U.S. 39555).

2305. In a July 1993 Philip Morris presentation, titled "Merit Franchise," prepared by Norma Suter Drew, Brand Manager and Marketing Director for Merit cigarettes from 1992-1994, she reported that the "Intended Audience" of Merit advertising was "self-conscious low tar smokers who want to cut down on tar and nicotine but who won't sacrifice taste completely." 2070661683-1727 at 1714 (U.S. 40337); accord 2041453659-3754 at 3678 (U.S. 23906) ("Merit's consumers are self-described 'Uncomfortable Smokers' who tell us they are self-conscious about the fact that they smoke"); 2063690017-0018

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(U.S. 85002); LeVan PD, United States v. Philip Morris, 6/25/02, 178:13-181:2.

2306. In November 1994, Philip Morris commissioned a study from the research firm Guiles & Associates, titled "B & H Qualitative Research Exploring Out-Switching," to "understand more about how Benson & Hedges smokers exit the franchise." One of the conclusions reported in the study was:

For many smokers, the ultimate ramification of all the anti-smoking rhetoric has been their heightened commitment to quit (or at least reduce) their smoking. For these, the greatest evidence of

this commitment has been in shifting tar levels (even to different brands, as necessary). . . . For many, lowering tar levels is the next best thing to quitting.

2072622442-2451 at 2444, 2445, 2449 (U.S. 41562); see also 2063688212-8284 at 8226 (U.S. 39823) (Jan. 18, 1994 document prepared for Philip Morris USA indicating that Merit is perceived as a "quitters brand"); Bonhomme WD, 41:4-44:5.

2307. Philip Morris's 1994-1998 Plan Overview stated:

If ultra low tar segment growth accelerates, we will launch Marlboro Ultra Lights to prevent Marlboro from losing smokers. Marlboro Ultra Lights will reinforce Marlboro's appeal among tar `conscious' Lights smokers and improve Marlboro's ability to retain smokers as they age.

2071032180-2206 at 2188 (U.S. 21964); Bible PD, United States v. Philip Morris, 8/22/02, 163:8-165:2.

2308. An internal July 1995 draft presentation, titled "Marlboro Women," bearing the handwritten notation "Approved as Revised, VMM [Virginia Murphy, a Philip Morris attorney] 8/9/95," includes a section titled "The Marlboro Lights Female." The presentation stated that "[p]opularity and low tar are why they initially smoke the brand." The presentation further noted that for female Marlboro Lights smokers, 27% of 18-24 year olds, 29% of 25-29 year olds, and 34% of 30-39 year olds were "Under Pressure To Not Smoke," and that 21%, 16%, and 30% of each age group, respectively, "Intends to Quit." 2071373667-3751 at 3709, 3750 (U.S. 27272).

2309. In a March 26, 1996 cover memorandum, Shari Teitelbaum delivered to Jodi Sansone, then Brand Manager for Merit cigarettes, a consumer research report commissioned by Philip Morris to "gain an understanding of consumers perceptions of the lowest category, as well as the motivations and wants of smokers of Carlton, Now, and Merit Ultima, and potential down-switchers to this category." Under the heading "The Decision to Enter the Lowest Category," the attached consumer research report found:

At some point in their smoking histories, these smokers decided or became more receptive to the idea of a lighter or lower brand than the one they were currently smoking. Some cited perceived health concerns. Others had been "bugged" by family members at home to cut down, or stop smoking.

2045628312-8328 at 8320, 8326 (U.S. 22217).

2310. In August 1996, Natalie Ellis, Senior Manager at Philip Morris, and Urvashi Kohli distributed a June 1996 consumer research study, titled "Marlboro Ultra Lights: A History," to a long list of Philip Morris employees, including Norma Suter Drew, then Director of New Products for Marlboro, gauging consumer reactions to the contemplated launch of Marlboro Ultra Lights. The study found that Marlboro Red smokers see Marlboro Ultra Lights as "a brand for quitters and people

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who are trying to cut down." 2071535027-5090 at 5090 (U.S. 22020).

2311. In an October 4, 1999 letter, titled "Schedule for Merit Competitive Lights and Ultra Lights Study," Beth Hooper of Leo Burnett discussed an upcoming Philip Morris study being conducted to "[e]xplore adult smoker attitudes toward the Lights/Ultra Lights category" and to "[b]etter understand

the impact of Marlboro Ultra Lights on the category overall." Under the heading "Background," Hooper noted:

The dynamics of the Lights/Ultra Lights category have changed significantly over the past several years, particularly with the entry of Marlboro Ultra Lights. In the past, Lights and Ultra Lights were stops on the way to leaving the tobacco category. However, today, we are seeing that both segments are the destination of choice for many adult smokers.

2080929561-9562 at 9561 (U.S. 27786).

2312. According to Jeanne Bonhomme, Director of Consumer Insights for Philip Morris, the company was aware that some "consumers who wanted to quit were switching to several of its light cigarette brands instead of quitting." Bonhomme WD, 45:17-19.

(3) R.J. Reynolds

2313. A 1969 RJR Survey of Cigarette Smoking Behavior and Attitudes recognized that "[a]s a group filter cigarette smokers were more conscious of a possible relationship between smoking and health," and recognized the "willingness of an increasing number of smokers to compromise—to smoke what they considered to be a less harmful cigarette rather than give up smoking entirely." 650340129-0193 at 0180, 0183 (U.S. 20948).

2314. RJR's advertisements for Vantage cigarettes employed signed testimonials by smokers who claimed to have considered the risks of smoking and decided not to quit smoking, but rather to switch to Vantage. The Vantage advertisements included the following:

1971: "You don't cop out. Why should your cigarette? Vantage doesn't cop out. It's the only full-flavor cigarette with low 'tar' and nicotine." (no bates) (U.S. 3545).

1974: "Instead of telling us not to smoke, maybe they should tell us what to smoke. For years, a lot of people have been telling the smoking public not to smoke cigarettes, especially cigarettes with high tar' and nicotine. But the simple fact is that now more Americans are smoking than ever before. Evidently many people like to smoke and will keep on ... no matter what anyone says or how many times they say it. Since the cigarette critics are concerned about high tar' and nicotine, we would like to offer a constructive proposal. Perhaps instead of telling us not to smoke cigarettes, they can tell us what to smoke. For instance, perhaps they ought to recommend that the American public smoke Vantage cigarettes." (no bates) (U.S. 4403); Schindler WD, 79:9-23.

1976: "To smoke or not to smoke. That is the question. With all the slings and arrows that have been aimed at smoking, you may well be wondering why you smoke at all." (no bates) (U.S. 5198); Schindler WD, 78:18-79:8.

1975: "Out of the last 6 years of smoking, I've only enjoyed the last 5 months. I started to pay attention to all the fuss about smoking about 6 years ago. That's when

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the uproar about tar' and nicotine started to get in the way of my pleasure. For me, it made the real difference between just liking smoking and really enjoying it. I thought of quitting, but I really didn't

want to. So I decided to switch to a low 'tar' and nicotine cigarette." (no bates) (U.S. 4954); Schindler WD, 79:24-80:9.

1976: "How many times have you decided to give up smoking? If you're like a lot of smokers these days, it probably isn't smoking that you want to give up. It's some of that 'tar' and nicotine that you've been hearing about." (no bates) (U.S. 4998); Biglan WD, 377:12-379:22.

2315. A June 1975 RJR marketing plan stated that the introduction of a Salem high filtration line extension was, in part, to "[p]rotect the current Salem franchise from quitting and switching losses." The introduction was to "[t]erminate the trend toward reduced consumption currently in evidence among the Salem Brand franchise." RJR recognized that Salem King smokers were reducing their daily cigarette consumption "at least partly due to concerns about the alleged health hazards of smoking." 502313230-3308 at 3235, 3240 (U.S. 22151).

2316. In discussing RJR's Limit, a new low tar cigarette, a 1976 memorandum noted that "LIMIT will satisfy the needs of smokers who wish for the ultimate in low 'tar' assurance—providing the strongest health reassurances available in cigarettes today." Under the heading "Target Audience," the memorandum stated:

The extreme worriers. That large group of smokers on the fringe of quitting who are on the verge of that final step: quitting smoking all together. This enormous group of smokers of various ages who have unsuccessfully tried to quit. Our target group will also include smokers whose concern with the health implications of smoking surpass their needs for full flavor in a cigarette.

502784092-4100 at 4097 (U.S. 22153); Schindler WD, 77:11-78:11.

2317. An August 19, 1976 RJR document, titled "New Product/Merchandising Directions," stated that the

"worrier" segment of the market (17% of smokers are so classified) . . . seek products with tangible/visible features to assuage their "concern" about smoking. "Numbers" products have a growing appeal to these smokers. Products in the 1-6 mg. "tar" range will continue to build successful long-term franchises (e.g., Carlton's growth rate, NOW's immediate acceptance).

500672011-2172 at 2069 (U.S. 20645).

2318. An August 5, 1980 RJR memorandum marked "RJR SECRET" from M.D. Shannon to Dr. W.M. Henly and Dr. R.A. Lloyd (all three were RJR researchers), titled "Project HR," stated:

ULT ["Ultra Low Tar"] smokers . . . Very health conscious—These smokers are well aware of the smoking and health controversy and have switched to ULT products in an effort to decrease "tar" intake. Many of these smokers are victims of pressure from peers and loved ones to quit or reduce smoking. Therefore, they smoke ULT brands to "get people off their backs . . ." Feelings of guilt about smoking are very strong . . . Many would like to quit smoking but cannot. This tends to fuel their low self-esteem . . . These smokers do not feel good about themselves. [S]everal concepts were developed to appeal to these smokers: 1. To convince the HR target that the new brand represents a payoff or reward for his forced decision to sacrifice by going

down in "tar" level. . . 2. To convince the HR target that the new brand is a reflection of his rational, sensible decision to switch to a low "tar . . ." Again an attempt is made to make him feel better about smoking.... Advertisements were developed ... to address these concepts and present them in a manner that would be positively received by the target audience.

500251567-1570 at 1567-1569 (U.S. 21563).

2319. An August 1981 report prepared for RJR by the Beaumont Organization advised that ultra low tar brands, such as Now, Carlton, Cambridge and Barclay, can cause smokers who seek to eliminate the "danger" of smoking to keep smoking, because these smokers believe the ultra low tar brands "reduce the alleged health risks" of smoking "to an acceptable—minimal—level":

Some smokers have been strongly alarmed by the extensive publicity concerning alleged health hazards of smoking, to the extent that they seek not merely to moderate their smoking but to eliminate entirely the "danger" that it may present. Such a smoker has two options. Firstly, he may simply cease smoking altogether. However, in some cases, the smoker does not wish totally to eliminate [sic] the benefits of smoking. His second option is to seek a cigarette which he perceives to reduce the alleged health risks to an acceptable—minimal—level. Within this second option, the smoker essentially seeks a brand that will protect him from the dangers that are alleged to attend smoking. He is often prepared to sacrifice most of the benefits he previously derived from smoking to achieve this. Such a brand provides the consoling sense that the smoker has eliminated the risks of smoking by "quitting," while continuing to engage in ritualized behaviors associated with cigarettes. An increasing number of brands addressed this benefit, including Now, Carlton, Cambridge and, perhaps, Barclay.

503972013-2063 at 2038 (U.S. 66448); Orlowsky WD, 86:4-7.

2320. A 1983 NOW Brand Image report prepared for RJR recognized that

[a] major motivation in brand switching has been concern over health . . . Most people chastise themselves for continuing with what they refer to as a "bad habit." They are aware of mounting pressures and criticism from non-smoking groups. They speculate about planning to quit, but they are not sure if they will be able to do so The typical solution to this dilemma is the two pronged approach of trying to cut down and/or moving to a lower tar brand.

The report further stated:

Respondents were asked what the words "low" and "lowest" in the ads meant to them. At the literal level they say this means that the two brands are very low or lowest in the amount of tar and nicotine they contain. They interpret this to mean that the two brands are "safer" and pose less of a health hazard. Consequently, they reason, this would make the brands more appealing to younger people who are very health conscious or to older, long-time smokers who are concerned about the long-range effects of tobacco.

506671319-1418 at 1326, 1379 (U.S. 22160); Orlowsky WD, 85:8-19.

2321. A November 3, 1998 e-mail from Mario Possamai to Randy Tompson, then Director of Issues and Information Management for RJR, discussed the results of an October 20, 1998 Gallup Survey regarding quitting behaviors and motivations. The survey found that "the number of smokers who are very interested in quitting

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has increased dramatically in the last five years," specifically noting that 36% of all current smokers are "very interested" in quitting. Health concerns were cited as the primary reason smokers want to quit, with 43% of smokers reporting that they were more concerned about health than they were five years earlier. Although 77% of smokers had tried to quit an average number of seven times each, more than half (54%) of smokers reported resuming smoking within one month. Over half of all smokers (53%) smoked light, low-tar or ultra-light cigarettes. According to the survey, "many of these smokers believe that they will get some health benefit from smoking non-regular cigarettes, including: 'to be healthier/improve health' (11 percent), 'reduce exposure to toxins/tar' (10 percent), and 'reduce exposure to nicotine' (9 percent)." 700173214-3217 at 3214-3217 (U.S. 22121).

(4) Brown & Williamson

2322. A January 19, 1978 memorandum from Dr. E.F. Litzinger to E.T. Parrack, with copies to Dr. R.A. Sanford and M.L. Reynolds, titled "Social Smoking Studies," stated:

We search for answers to the questions "Why do people smoke?" and "Why do people stop smoking?" to provide us with direction in developing new products. Perhaps answers to another question "How do people stop smoking?" could lend insight into the creation of new products. Having answers to this latter question we might then design products to "intercept" people who are trying to give up smoking.

650510607-0607 (U.S. 87138); Smith WD, 63:10-64:7.

2323. A February 7, 1979 letter from Stephen D. Schwartz of Grey Advertising Inc., stated that ultra low tar smokers of brands like B & W's Carlton and RJR's Now, have "consciously decided to sacrifice taste for low tar," and that these smokers "want a way to quit smoking." 774138538-8545 at 8539 (U.S. 54613).

2324. A "confidential" March 5, 1980 report prepared for B & W by Hawkins, McCain & Blumenthal discussed marketing strategies for a proposed new B & W brand pursuant to its "Project Omega." The report stated: "The objective of all advertising and promotion will be to convince low tar' smokers that this new brand is the only one that combines the two most important qualities a contemporary cigarette should have—a satisfying taste and the lowest tar." The report further stated, under the heading "Conclusions":

2) Low tar and ultra low tar smokers share personal "concern." The difference between them lies in the depth of the concern . . . 3) Most of these smokers would quit if they could. The pressure to quit is omnipresent from all sources 5) To reach these smokers we must acknowledge their concerns. 6) This acknowledgment must make them more comfortable (at ease) about smoking the Omega cigarette.

The report further stated: "These executions are built on an expanded strategy which includes an understanding of the target audience and the need to create a maximum ease or comfort level that addresses the concept of 'cognitive dissonance.'" 660026713-6718 at 6714, 6717-6718 (U.S. 85030); Smith WD, 64:19-65:14.

2325. A May 7, 1982 report prepared by a consultant for Imperial Tobacco Ltd. (the Canadian sister company of B & W) stated that youth believed the "truly light brands" were

false safety brands for the older worried smoker who cannot quit . . . Of course, they knew this because some ... had tried to go very low for exactly the same reasons as smokers two or three times

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their age do so. All they found was increased consumption and frustration.

Statements from young smokers included: "I think all the stuff coming out the past couple of years about how bad smoking is for you made a lot of people go down to a light cigarette to sort of ease their own conscience." 566627751-7824 at 7817-7818 (U.S. 20938).

2326. A 1984 B & W internal marketing research document, titled "Why People Smoke, Brand Imagery and New Product Opportunities," stated that both smokers of B & W's Barclay cigarettes and smokers of other brands "perceive BACLAY to be for one who wishes not to smoke." 670132512-2597 at 2566 (U.S. 20964).

2327. A 1986 B & W document stated: "Quitters may be discouraged from quitting, or at least kept in the market longer.... A less irritating cigarette is one route.... (Indeed, the practice of switching to lower tar cigarettes and sometimes menthol in the quitting process tacitly recognize this). The safe cigarette would have wide appeal." 566628004-8083 at 8015 (U.S. 20940).

2328. A December 16, 1999 "Presentation of Findings" for "STAR Tobacco Focus Groups" prepared for B & W by "Rabid Research" identified "4 segments of light/ultra smokers (segmented based on motivation for smoking light/ultra variant)." One of the four segments was identified as "those who switched to lights/ultras because they were attempting to quit." It also noted that some consumers "started smoking lights after making an attempt to quit." The document also shows that Defendants intended that their claims of reduced harm regarding low tar cigarettes lessen the social pressure on smokers to quit:

The benefits of switching to this new cigarette are not just health related[.] Would reduce the pressure on them from friends and family members to quit[.] Would allow them to feel better about themselves[.] At least I'm smoking a cigarette that isn't as bad for me[.] Maybe people wouldn't be as worried about me smoking around them cause it's a better cigarette.

190200047-0116 at 0061, 0071, 0106 (U.S. 22162); Ivey WD, 59:1-10.

2329. A July 27, 2000 document prepared for B & W by Kay Harwood Marketing Analysts, Inc., titled "Topline Report of Findings for Carlton Advertising Research," reported that smokers view Carlton cigarettes as a less harmful alternative to quitting smoking:

As participants described their transition from heavier to lighter (i.e., higher tar to lower tar) cigarettes, they frequently used phrases like "working my way down" and being "that much closer to quitting." Ultra light cigarettes were frequently associated with trying to quit smoking.... [M]any participants intimated that ultra lights already represent a sacrifice (i.e., less taste for a cigarette lower in tar and nicotine).

A "summary of the most common perceptions/images associated with" Carlton and Merit Ultra Light included descriptions of Carlton as for "[s]omeone trying to quit/ cut back/smoke lighter" and descriptions of Merit Ultra Light as a "[c]igarette used to quit smoking/almost ready to quit/cutting

back." Among the Report's "Key Findings" were the statements from the focus groups describing their perceptions of several Carlton campaigns. The statements included:

Trying to quit/cut down . . . to change/cut down. . . If you can't stop smoking, smoke Carlton—it's better for you if you can't quit . . . Cut down on smoking—better for you . . . Diet restrictions/

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quitting/cutting back . . . The least you could do . . . if you have to smoke . . . smoke the less harmful cigarette. . . If you've got to smoke, smoke this one . . . Cut down on your smoking. . . Directed to someone who wants to cut down is better for you if you cannot quit.—Quit smoking, or smoke less nicotine cigarettes . . . Don't feel bad if you can't stop smoking; if you smoke Carltons, you have accomplished something.... Use these in case of emergency nicotine fit while quitting Smoke when trying to quit emergency cigarette.—Switch to Carlton when quitting.

250255336-5347 at 5339, 5343-47 (U.S. 22031). These statements were repeated in an August 8, 2000 document prepared for B & W by Kay Harwood, Marketing Analysts, Inc., titled "Carlton Advertising Research: Report of Key Findings." 250255060-5075 (U.S. 22170); Ivey WD, 60:13-62:22; Smith WD, 62:9-63:6.

(5) BATCo

2330. A March 22, 1979 internal BACo document written by Terry Hanby, who researched "Smoking & Health reassurance" for BATCo, concluded that the sale of low tar cigarettes as "health reassurance" products would stem the decline in cigarette sales:

It is quite clear that the emergence of Hi-Fi products has been welcomed by much of the smoking community and their use is emerging as an important health reassurance mechanism for many smokers.... [T]he growth of Hi-Fi brands will increasingly ensure that up-market smokers will turn to them as a health reassurance mechanism [W]e feel that in the markets of `developed nations' the incidence of smoking may continue to decline but that the various reassurance mechanisms listed above will ensure that this decline will eventually plateau at a level not too far removed from current incidence levels.

109883112-3117 at 3115, 3117 (U.S. 20264); 105657908-7909 (U.S. 20248).

2331. A BATCo memorandum dated April 4, 1979, titled "Year 2000," contained predictions for the future of the tobacco industry:

Low tar products will eventually and substantially define the tobacco business. This will serve as an important mechanism for reassuring smokers . . . Quitting rates will also not increase as existing smokers become increasingly reassured by the growth of Low Tar brands the ready availability of Low Tar brands will supply high reassurance.

109883101-3103 at 3101, 3102 (U.S. 21518).

2332. An April 23, 1979 BATCo Research Report concluded that "most smokers wish to quit smoking." 105562110-2189 at 2114 (U.S. 21516).

2333. An April 28, 1981 memorandum by Dr. Martin Oldman, titled "Low Delivery Cigarettes and Quitting" and delivered to Dr. L.C.F. Blackman, Director of Millbank, stated:

The role of low delivery cigarettes in a health-conscious market, and for the health concerned individual, can probably be best explained in terms of a simple balance model. This would suggest that the individual smoker seeks to reduce the tension arising from the perceived incompatibility between his health concern and continuing to smoke by making various psychological and behavioural adjustments. For some the tension will only be sufficiently reduced by quitting. For others, an adequate discharge will be achieved by reducing the number of cigarettes smoked and, for yet others, a switch to lower delivery cigarettes is the appropriate modification.

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In all cases, the model would suggest, the individual makes only that change in his smoking behavior which is sufficient to offset to a tolerable level the tension arising from the perceived conflict between smoking and his health concern.

105399687-9689 at 9688-9689 (U.S. 85032).

2334. Notes of a July 12, 1983 meeting of BATCo's newly established "Sidestream Working Party" stated: "Smokers who are concerned about the smoking and health aspect but who have not given up, have done all they can (by moving to lower tar brands) to avoid the pressure to quit." The notes continue, recognizing that

[m]arket research undertaken in the U.S. and the UK indicates that smokers would welcome a reduction in the visible smoke they are creating as it would ease the social pressures being increasingly placed upon them and provide a degree of solace, in that they themselves can do no more—short of quitting—having already moved down the tar scale.

109881462-1467 at 1462-1463 (U.S. 26230).

2335. A circa 1984 BATCo "R & D/Marketing Conference" report stated: "It is useful to consider lights more as a third alternative to quitting and cutting down—a branded hybrid of smokers' unsuccessful attempts to modify their habit on their own." This document also stated that lights "offered one solution to the smokers dilemma" regarding the adverse health effects of smoking. 100501581-1657 at 1593 (U.S. 20187) (emphasis in original).

2336. An internal document from Imperial Tobacco Ltd., the Canadian sister company of B & W, and a subsidiary of BATCo, stated that the company viewed the promotion of light cigarettes as the "ability to reassure smokers, to keep them in the franchise for as long as possible." 689466032-6789 at 6351 (U.S. 31053).

2337. A BATCo document bearing the heading "Barclay Business Review 1996" reported that ultra light cigarettes are particularly attractive to people who may start smoking again after quitting. The document stated that, due to its packaging, the Barclay cigarette (in the Netherlands) was "not clearly perceived as an ultra light and consequently lost attractiveness particularly amongst re-starters who look for an ultra light offer." This appeared under the heading "The core positioning of the brand needs to be clarified in the minds of the consumer." 700767443-7457 at 7446 (U.S. 22123) (emphasis in original); Ivey WD, 79:5-22.

2338. A January 2001 BATCo file, titled "Consumer Concept Trial Notes Jan 2001 Project Baltec II," contained a section dated January 10-12, 2001, titled "Philadelphia—General Impressions and Summary," that detailed the results of consumer research on low tar cigarette smokers, stating: "General feeling that lights are healthier . . . Who the consumers of the product might be— . . . Smokers who don't want to quit but are concerned about their health[;] Step toward quitting[;] Trading down to lights." 325238922-8994 at 8992-8993 (U.S. 22079) (Confidential).

2339. A January 15, 2001 BATCo document written by Steven Coburn, titled "Project Balcony," that referenced California marketing studies related to proposed advertising campaigns, acknowledged that low tar cigarettes are smoked by people who want to quit: "3rd board highlights low nic/tar aspect—quitters cig." 325239014-9022 at 9015 (U.S. 22082). A document with the same author, title and date that also referenced California smokers stated "less tar less nic—less harmful . . . 2nd board implies a cigarette to be used as a substitute for quitting." 325239014-9027 at 9017 (U.S. 22082).

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(6) American Tobacco

2340. A November 11, 1976 report prepared by Fay Ennis Creative Research Services for F. William Free & Company, an advertising agency used by American Tobacco, summarized focus group sessions relating to low tar cigarettes. The report stated: "By changing to a lower tar cigarette, [the panelists] felt less guilty about continuing to smoke and eventually hoped to stop smoking completely." The report stated that "[s]ome of the panelists actually tried smoking brands of low tar in a downward progression of milligrams in order to quit smoking entirely." ATC037310-7324 at 7318, 7320 (U.S. 87890).

2341. A May 25, 1977 report, titled "Tareyton Lights Field Trip Report," prepared for American by SSC & B Advertising, reported results of focus group research conducted on Tareyton Lights, stating:

In general, most people who smoke would like to quit. Primary reasons for smoking low tars are: It is a means of cutting down on the amount of tar ingested. It is a first step in quitting; people step down in stages to a lower tar cigarette until finally they are smoking the lowest tar. Even among those who enjoy smoking low tars help alleviate their concern.

ATC0136995-7017 at 7005, 7006 (U.S. 87906).

(7) Lorillard

2342. Lorillard's internal marketing documents demonstrate that Lorillard commissioned extensive consumer research on its cigarettes. For instance, an August 4, 1975 presentation given to Lorillard by a marketing research consultant, titled "Cigarette Advertising 1974-1975," showed that several of the respondents concluded that Lorillard's "Quit or smoke True" advertisements communicated that True cigarettes are "LESS HARMFUL/BETTER FOR YOU." 03496228-6630 at 6277, 6280 (U.S. 20057).

2343. A December 1976 report prepared for Lorillard by the Nowland Organization, Inc. "to develop market information useful to Lorillard in strengthening its position in the SHF [super high filtration]/low T & N [tar & nicotine] cigarette market," titled "SHF Cigarette Marketplace Opportunities Search and Situation Analysis Volume I," stated: "As would be expected, the advantages of low tar and nicotine cigarettes are seen as health related." The document further stated:

On the more positive side, many SHF [super-high filtration] smokers note that the existence of low tar and nicotine cigarettes, and their switch to such cigarettes, has alleviated some of their health concerns A number of SHF smokers note that they turned to this "compromise" smoke because, while they felt they should quit smoking (a few on doctors' advice), they were unwilling or unable to do so ... yet. They see smoking low tar and nicotine cigarettes both as a way to cut back on the intake of harmful substances without cutting back on the number of cigarettes habitually smoked; and (in some cases) ... so that they will be able to quit more easily at some future time. The fact that many SHF smokers (women especially) now find themselves smoking more than when they smoked regular cigarettes works to defeat their purpose in switching, and is a source of considerable annoyance to them.

Under the heading "Reasons for Prior Brand Switching The Switch to SHF," the document stated:

As discussed, most SHF smokers deliberately chose to switch to low tar and nicotine cigarettes because of health

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concerns—to get less tar and nicotine, for a milder/gentler smoke, and/or to relieve specific smoking-related symptoms. Often, the actual switch was precipitated by... .

—experiencing or becoming more aware of, or more concerned about personal ill-effects from smoking (e.g., cough, throat irritation, difficulty breathing)

* * * * *

—a failed attempt to quit, or a (perceived) inability to quit, coupled with the heightened perception that one 'should' quit

The main advantages which they feel they experienced in this switch are ... they have less (or no) smoking irritation . . . they like knowing they are getting less tar and nicotine.

84053616-3706 at 3618, 3628, 3632, 3637, 3678-3679 (U.S. 55997).

2344. Volume II of this Report contained the following "Key Highlights":

Health concerns are the usual reason for switching to a low T & N brand. Such cigarettes are "better for you"—milder and less irritating (now) as well as less likely to cause serious problems (later). ... To many SHF smokers, a low T & N cigarette represents a compromise smoke between a more satisfying smoke and not smoking at all.

The report also stated: "Those who smoke low tar and nicotine cigarettes generally do so because they believe such cigarettes are 'better for you' ... there is less tar and nicotine to do long-term damage ... reduces smoking anxiety, guilt." 84053709-3744 at 3712-3713, 3716-3719 (U.S. 21073).

(8) Liggett

2345. In a December 2, 1968 letter from Max Samfield, Senior Assistant Director of the Liggett Research Department, to Copeland Robinson, New Products Manager at Liggett, Samfield discussed the importance of releasing Dorset brand cigarettes, citing: "The obvious void in the 4-6 mgm range for a low tar cigarette with acceptable taste. I firmly believe that those who switch to Marvels, Carltons, or

Life cigarettes are in the last stages of quitting smoking. The Dorset, however, is a low tar cigarette one can 'live' with." LWD0J8006760-6760 (U.S. 87909).

4. Despite Their Internal Knowledge, Defendants Publicly Denied that Compensation Is Nearly Complete and that the FTC Method is Flawed

2346. Despite evidence spanning multiple decades showing Defendants' extensive knowledge of compensation, Defendants concealed that knowledge and disseminated false and misleading statements to downplay its existence and prevalence. As part of their attempt to portray low tar cigarettes as less harmful, Defendants publicly endorsed retaining the FTC Method well into the 1990s because of its usefulness to consumers. Henningfield WD, 48:14-49:7; 54:7-15; 55:6-12; 2041186475-6517 at 6475, 6486-95, 6498-04 (U.S. 22181*) (1994—B & W, American Tobacco, Lorillard and Liggett defending the validity and usefulness of the FTC Method to consumers); 2048381972-2310 at 1975 (U.S. 22190); 521321297-1301 at 1297 (U.S. 22137); 520011445-1480 at 1445, 1457-58 (U.S. 22101) (1994—various public statements by RJR employees defending the validity of the FTC Method); 2505597781-7998B at 7968-87 (U.S. 23028*) (1996—Defendants' statements defending the utility to consumers of the FTC Method).

2347. As Defendants knew, the smoking regimen used in the FTC Method was designed to approximate smoking behavior in the 1930s, when cigarettes were relatively

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simple devices: few had filters, and perforated filter ventilation cigarettes were not in production. Henningfield WD, 47:11-21.

2348. When the FTC Method was adopted, it was understood that, while it was intended to provide a useful measure of the amount of tar and nicotine that particular brands generate when smoked in a uniform fashion, so that smokers could compare brands, the standardized FTC Method—or any standardized testing procedure for that matter—would not totally accurately represent the amount of tar and nicotine that any particular smoker would ingest. 03531981-1986 (U.S. 22243); (no bates) (JD 040254); (no bates) (JD 048746).

2349. As noted in Section V(E)(1)(c), *supra*, while the FTC contemplated at the time it adopted its Method that numerous potential variations among individuals in everyday smoking behavior could have some effect on tar and nicotine yields, it did not have a full understanding of smoker compensation—that smokers' addiction to nicotine would cause them to smoke low tar cigarettes more intensely to satisfy their nicotine addiction, and thereby inhale amounts of tar and nicotine comparable to those inhaled by smokers of full flavor cigarettes. Defendants withheld their long-held knowledge that the primary reason the FTC Method could yield misleading data was that nicotine addiction would drive smokers to obtain relatively stable nicotine intakes through smoker compensation. Henningfield WD, 48:3-49:7.

2350. When the FTC Method was adopted, the Tobacco Institute offered several criticisms in an August 1, 1967 press release, but none of those criticisms related to smoker compensation. Instead, the Tobacco Institute criticized the number of cigarettes tested, the length of the cigarette smoked, and the lack of dissemination of tar yields per cigarette puff. The Tobacco Institute stated that "there is no valid scientific evidence to show that . . . 'tar' and nicotine [] are responsible for any human illness" and then

proposed several changes to the FTC Method, most of which were based on claims that FTC tar and nicotine yields were inaccurately high. The Tobacco Institute argued that twice as many sample cigarettes should be tested to arrive at FTC yields, that the FTC Method should use a longer butt-length (which would have lowered FTC tar and nicotine yields by smoking less of the cigarette), and that tar and nicotine yields should be disclosed on a per-puff, as well as a per-cigarette, basis. For these reasons, the Tobacco Institute claimed that the FTC Method "may be deceptive because a smoker may assume his cigarette is delivering the amount of `tar' and nicotine reported by the FTC when in fact it will be delivering much less, the way he smokes." TIMN0120846-0849 at 0847-0848 (U.S. 87967).

2351. Even at the time it was developed, scientists understood that the FTC method, like any standardized method, would provide an imperfect measure of the exact amount of tar and nicotine that a particular smoker would ingest from a particular cigarette. Instead, the method was intended to give representative approximations of the amounts of tar and nicotine generated by different brand cigarettes when smoked under identical conditions. Those approximations could then provide a useful comparison of the tar and nicotine a human smoker would receive from smoking different brands. For example, the FTC stated in 1983: "If consumers avoid blocking ventilation holes, cigarettes smoked in the same fashion will yield `tar', nicotine, and carbon monoxide in general accordance with their relative FTC rankings."

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03573029-3030 at 3029 (U.S. 22244); 48 Fed.Reg. 15,953 at 15,954 (Commission Determination Re Barclay Cigarettes; Amendment of Report of "Tar," Nicotine, and Carbon Monoxide Content of 208 Varieties of Cigarettes; Request for Comment on Possible Testing Modifications). While the FTC Method does provide a means by which to compare brands, the comparison does not meaningfully relate to the reality of smoking.

2352. In a November 29, 1994 written statement submitted for the December 5-6, 1994 NCI Conference on the FTC Cigarette Test Method, B & W, American Tobacco, Lorillard, and Liggett defended the FTC Method, stating that "The FTC's Test Method Provides Useful and Reliable Information About the Relative `Tar' and Nicotine Yields of Cigarettes," and contending that FTC yields are a "useful predictor" of the amount of tar and nicotine smokers will inhale. 20411864756517 at 6475, 6486-95, 6498-6504 (U.S. 22181*).

2353. RJR employees, David Townsend and Donald de Bethizy, maintained at the same Conference, in both their written and oral statements, that the FTC Method was a valid and accurate test method that approximates human smoking. 2048381972-2310 at 1975 (U.S. 22190).

2354. In his written statement, Townsend asserted that the FTC Method "provides accurate and reliable information" that "is a key factor for consumers to make objective choices in the marketplace" and stated that "implementation of the FTC testing for `tar' and nicotine . . . was an important step in providing data for the consumer to use to make an informed decision in the marketplace." 521321297-1301 at 1297 (U.S. 22137). Townsend further stated that

it is clear from the information, I believe, that the FTC test method does provide accurate and reliable information for the consumer to use in the marketplace; that is, to compare yields of various brands and make objective choices. The consumer makes choices based on the FTC information, or the

rankings derived from that information The FTC method was established to provide accurate and reliable comparative smoke yield information, and has been very successful in doing that.

2048381972-2310 at 2252, 2256 (U.S. 22190).

2355. De Bethizy stated: "The FTC method provides an accurate and meaningful ranking of cigarettes On average, smokers absorb approximately the yield of nicotine predicted by the FTC method, and smokers of lower yielding products absorb less nicotine" 520011445-1480 at 1445, 1457-58 (U.S. 22101). He also stated: "The FTC method provides an accurate and meaningful ranking of cigarettes [T]he compensation phenomenon does not undermine the FTC method." 2048381972-2310 at 2264, 2267 (U.S. 22190).

2356. In their 1996 comments on the FDA's proposed tobacco Rule, Defendants continued to maintain that there is a meaningful relationship between the FTC ratings and smoker tar and nicotine exposure. 2505597781-7998B at 7968-87 (U.S. 23028*).

2357. While defending the FTC Method and resisting proposed changes to it, Defendants have made repeated public assertions that they have substantially reduced the tar and nicotine deliveries of cigarettes, citing the FTC ratings as their primary support for this assertion. 2505597781-7998B at 7987-88 (U.S. 23028*) (1996 Comments of B & W, Liggett, Lorillard, Philip Morris, Inc., RJR & Tobacco Institute before the U.S. FDA,

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Vol. III) (claiming that "over the years, the average yield of cigarettes generally has declined markedly The fact is that from 1950 to the present, U.S. cigarette manufacturers have reduced `tar' and nicotine yields by more than 60 percent"); 2046932308-2363 at 2314-2315 (U.S. 85067) (Philip Morris 1994 submission to NCI regarding the FTC Method, asserting "an overall decrease in the `tar' and nicotine intake of smokers" as a result of reduced FTC yields); 521321297-1301 at 1299 (U.S. 22137) (1994 RJR employee's statement that "all cigarettes are substantially lower in `tar' yields than they were in past years" and his claim that "[c]igarette design changes have resulted in an overall major reduction in smoke yields.").

2358. A February 7, 1996 Covington & Burling memorandum, from Tobacco Institute attorney David H. Remes to attorneys and senior employees from Philip Morris and B & W and attorneys from the law firms of Arnold & Porter and Collier Shannon, summarized a meeting held earlier that day between Remes and C. Lee Peeler, Director of Advertising Practices in the Bureau of Consumer Protection at the FTC. At this meeting, Remes relayed to Peeler the industry's claim that low tar cigarettes actually do deliver less tar and nicotine to smokers, and that consumers need not be informed about changes in smoking behavior related to smoker compensation. Remes communicated his "observation that in many cases low-yield brands contain so much less tobacco than higher-yield brands that any compensation could not begin to erase the difference." Remes also said that he had made a "suggestion that smokers do not need to have it explained to them that smoking a lot of low-yield cigarettes will result in greater T & N deliveries, just as people do not need to be told that eating a lot of low-fat cookies can make them fat." Remes noted that Mr. Peeler "responded that the analogy does not hold because we know how much fat is `delivered' in each cookie but not how much T & N is delivered by each cigarette." 92613896-3899 (U.S. 87919); Wells WD, 63:1-64:16.

2359. Over the years, there has been discussion in the scientific community about revising the FTC Method to make it a more accurate measure of the tar and nicotine that human smokers actually ingest. Defendants have opposed changing the FTC Method, arguing that it provides a way for consumers to choose cigarettes and meaningfully compare them in terms of the tar and nicotine exposure from smoking. Henningfield WD, 55:6-12.

2360. For instance, in September 1997, the FTC solicited public comment on a proposal to replace the existing FTC test method with a methodology that would "provide information on the tar, nicotine, and carbon monoxide yields obtained under two different smoking conditions" to provide "a range of yields for individual cigarettes smoked under less intensive and more intensive smoking conditions," and to convey to smokers that "a cigarette's yield depends on how it is smoked." FTC Cigarette Testing; Request for Public Comment, 62 Fed.Reg. 48,158, 48,159 (Sept. 12, 1997) (U.S. 88618). In response, Philip Morris, RJR, B & W, and Lorillard submitted joint comments to the agency defending the current FTC Method and opposing the proposed change, stating: "The manufacturers believe that the current test method should continue to be used. They are not convinced that it should be supplemented with a second test method." Comments of Philip Morris Inc., R.J. Reynolds Tobacco Co., Brown & Williamson Tobacco Corp., and Lorillard Tobacco Co. on the Proposal Titled FTC Cigarette Testing Methodology Request for Public Comment (62 Fed.Reg. 48,158) at 2-3, (no bates) (U.S. 88618) ("Joint Comments").

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2361. The comments further stated that: "Smokers are familiar with the ratings produced by the current test method, and continued use of the current test method assures historical continuity of the data. For these reasons, testing under the current FTC test method should continue." *Id.* at 4. The comments referred to compensation as a "hypothesized" and "weakly documented phenomenon" and stated: "The testing protocol should not be modified to reflect 'compensatory' smoking", in part because "current knowledge about these behaviors is too sparse to be usable for modeling purposes." *Id.* at 43.

2362. Defendants' comments urged that "[t]he protocol should not be modified to incorporate a vent-blocking condition." In response to the FTC's question: "What kinds of consumer education messages should be created to inform smokers of the presence of filter vents and the importance of not blocking them with their fingers or lips?" Defendants' 1998 comments stated: "The manufacturers are not convinced that vent-blocking is a sufficiently common or documented phenomenon that smokers should be alerted to the presence of filter vents and instructed not to block the vents." *Id.* at 60, 82.

2363. In response to the FTC's question: "If the effect of compensatory smoking behavior is not incorporated in the tar and nicotine ratings, should a disclosure warning smokers about compensatory smoking behavior be required in all advertisements?" Defendants' 1998 comments stated: "The manufacturers are not convinced that compensatory smoking behavior is a sufficiently common or documented phenomenon that consumers should be alerted to its existence" *Id.* at 89.

a. Tobacco Institute

2364. In anticipation of the 1981 Surgeon General's Report, the Scientific Affairs Division of the Tobacco Institute drafted a December 15, 1980 memorandum to Horace Kornegay, President of the Tobacco Institute, warning that, among other issues, the Report was expected to include a discussion of

smoker compensation. Rather than recommending disclosure of full and complete information on the subject to the public, the "Response" section of the memorandum stated:

[I]t is suggested that the TI take the following position on the report and that on receipt of any queries from the press, staff be instructed to respond as follows: "The results of research in the past are so mixed that it is impossible to reach and support a firm conclusion at the present time. All one has to do is be aware of and appreciate the call for more research to realize that the Surgeon General's Office cannot objectively have a strong position supported by research. The office is looking for more money in order to support the current campaign against the tobacco industry."

TIMN0073798-3799 at 3799 (U.S. 85127).

b. Philip Morris

2365. In a June 29, 1988 "Statement of Philip Morris, U.S.A." to Congress, Philip Morris made statements equating machine measured tar and nicotine deliveries with actual smoker intake:

From the 1940s to today, Philip Morris has similarly spent millions on its own research program to modify its cigarettes. As a result, the "tar" and nicotine yields of today's cigarettes—the principal concern of the scientists who believe cigarettes pose health risks— have been reduced as much as 95% from the 1957 averages [I]t was Philip Morris scientists who perfected the instrument that was used for many years by the Federal Trade Commission and other groups around the world for the measurement of "tar" and nicotine yielded

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by cigarettes ... [filter] ventilation techniques also contributed to an overall reduction in tar' and nicotine levels . . . As a result of these advances in filtration and ventilation, Philip Morris and the other cigarette companies were able to reduce "tar" and nicotine levels substantially in the late 1950s... As a result of these dramatic reductions in the "tar" and nicotine levels of the leading brands, as well as the introduction of entirely new low-delivery cigarettes, the overall intake of "tar" and nicotine by American smokers decreased dramatically even before the Surgeon General's Report against smoking in 1964.... As a result of all this research, Philip Morris succeeded in reducing "tar" and nicotine levels even more in the years following the 1964 Surgeon General's Report.

TI01770431-0458 at 0433, 0439, 0441-0443, 0451 (U.S. 85065).

2366. In his April 14, 1994 written Statement before the House of Representatives Subcommittee on Health and the Environment of the House of Representatives Energy and Commerce Committee, William Campbell, President and CEO of Philip Morris USA, stated, contrary to extensive information developed by and known to Philip Morris USA, that "consumers are not misled by the published nicotine deliveries as measured by the FTC method." Campbell also claimed that "tar and nicotine levels have decreased dramatically over the past 40 years. Today, the market is populated with a number of 'ultra low' brands which deliver less than 5% of the tar and nicotine of popular brands 20 years ago." In a statement carefully worded to refer only to the number of cigarettes smoked, ignoring all other methods of smoker compensation, Campbell both misrepresented the evidence about whether downswitchers smoke more cigarettes per day and denied that smoker compensation rendered the FTC tar and nicotine yields misleading:

Commissioner [David] Kessler suggested that the FTC figures were misleading because smokers might "compensate" for lower tar and lower nicotine brands by smoking those cigarettes differently. In fact, the data indicates that, despite the dramatic reductions in tar and nicotine levels over the past decades, the number of cigarettes smoked by an individual has remained constant, and even declined slightly. More importantly, the data shows no difference in the number of cigarettes smoked by those who favor higher and lower yield brands.

ATC2746877-6887 at 6877, 6878, 6887 (U.S. 59009); compare with 1000861953-1953 (U.S. 35484) (Wakeham 3/24/61) ("As we know, all too often the smoker who switches to a hi-fi cigarette winds up smoking more units in order to provide himself with the delivery which he had before.").

2367. An October 1994 document that Philip Morris submitted to the United States National Cancer Institute, titled "Submission of Philip Morris Incorporated to the National Cancer Institute Consensus Conference on the FTC Cigarette Testing Methodology and Rating System," stated:

A number of the FTC's questions ... relate to "compensation," a term used to suggest that some smokers of lower yield cigarettes may sometimes alter their smoking behavior in ways that may tend to reduce the differences in yields among brands and styles implied by their relative FTC method ratings. While there is a fair amount of recent literature on compensation, few studies have been performed that provide reliable data to establish the occurrence of this suggested phenomenon. We appreciate the interest people have in possible

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compensation. But there can be no real dispute that, to date, the scientific literature on compensation is limited and inconclusive.... [W]hatever conclusions may be reached about compensation, the FTC method remains an appropriate standard for measuring cigarette properties. The reporting of FTC method yields ... remains a useful source of information to consumers choosing among cigarette brands and styles.

2046932308-2363 at 2312, 2362-2363 (U.S. 85067).

2368. A document, titled "Philip Morris Management Corp., Worldwide Regulatory Affairs Department, 1996 Core Issues Plan," discussed under the topic of "Core Issue # 2 Federal Trade Commission," Philip Morris's response to an NCI Conference recommendation to change the FTC Method and to provide more information to consumers: "Preserv[ing] our ability to ... advertise low tar/light and ultra low tar/ultra light cigarettes as such; avoid changes in the FTC method for as long as possible; [and] minimize changes in the FTC method to the extent possible . . ." 2046266224-6268 at 6234 (U.S. 23936).

c. R.J. Reynolds

2369. In a July 2, 1984 letter to the FTC from Samuel B. Witt III, RJR Vice President, General Counsel, and Secretary, Witt stated:

[T]he Commission has also asked for comment on broad questions concerning "smoker compensation...." In their submissions [in response,] health organizations take the position (which is not correct) that the average smoker will get the same amount of "tar" and nicotine from higher and lower "tar" cigarettes, therefore making the Commission's numbers irrelevant to the consumer. RJRT, on the

other hand, maintains that the average smoker will get less "tar" from smoking a low "tar" cigarette than he or she will receive from smoking a higher "tar" product, and that the average smoker of low "tar" cigarettes does not smoke more cigarettes than the average smoker of higher "tar" cigarettes.

2025045756-5761 at 5760 (U.S. 22247).

2370. In an April 14, 1994 statement to the House of Representatives Subcommittee on Health and the Environment of the House Energy and Commerce Committee regarding the potential regulation of cigarettes by the FDA, RJR stated:

Since the 1950s, Reynolds tobacco has pursued . . . development of new technologies to reduce yields of "tar" and nicotine generally . . . [this] line of research has been remarkably successful. . . . The important point is that in spite of broad variations in how individual smokers may smoke any given cigarette, the fact remains that the lower the yield by FTC numbers, the lower the yield will be to any given smoker. The yield for any given smoker will probably be different from the FTC yield; for some smokers it will be higher, for some it will be lower, but overall, the FTC yields are generally predictive of the yield to smokers as a group. The statement, however, that "in reality" low yield cigarettes do not yield low "tar" and nicotine, is not true.

516962199-2227 at 2203-2204 (U.S. 85128).

d. Brown & Williamson

2371. In the mid-1990s, Tommy Sandefur, B & W CEO, submitted a written statement to Congress defending the FTC Method: "We also vigorously dispute the suggestion of [David] Kessler and [John] Slade that the 'tar' and nicotine ratings produced using the FTC test method are meaningless or misleading." More than ten years earlier, on March 19, 1984, Ernest

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Pepples, B & W Senior Vice President and General Counsel, wrote a letter to Howard Liebengood of the Tobacco Institute acknowledging that FTC tar and nicotine ratings "may be misleading to consumers" and bear no relation to actual consumer intake. Compare 682637627-7629 at 7629 (U.S. 22946) with 521060910-0912 (U.S. 20892).

2372. Susan Ivey, President and CEO of B & W, admitted at trial that B & W "has been aware for many years" that some smokers compensate when smoking low tar cigarettes. B & W takes a different position on its website, which states that "[t]he question of why compensation occurs is still the subject of scientific research, and the relative importance of tar versus nicotine in determining compensation is unclear." The website also states that "how much smokers alter their behavior when they switch to lower tar products, and for how long, is still unclear." The website also states that "our studies show that, as actually smoked by consumers, lower tar cigarettes will generally deliver less tar and nicotine than higher tar cigarettes, and cigarette deliveries generally align with the ranges associated with the descriptors: ultra lights, lights, and full flavor." Ivey WD, 67:19-21; TLT1040050-0055 at 0052-0054 (U.S. 88620); Ivey WD, 64:1-67:11.

e. BATCo

2373. In an October 1999 Memorandum by British American Tobacco to the U.K. House of Commons Health Committee, titled "The Tobacco Industry and the Health Risks of Smoking," BATCo discussed compensation:

It is clear that compensation does occur, but that . . . despite compensation, smokers receive less tar on average when switching to a lower tar cigarette. . . . The evidence suggests that increasing the number of cigarettes consumed, blocking of ventilation holes and increasing inhalation depth, are not common compensation mechanisms.... The limited evidence of which we are aware, suggests that switched smokers either revert gradually to their former, non-compensatory behaviour (which results in lower overall intake of smoke), or change again to a brand which they prefer and which does not require the extra "effort" of taking larger puffs (which may or may not result in lower intake).

322017057-7142 at 7108-09 (U.S. 22068); Ivey WD, 69:4-13.

f. American Tobacco

2374. Eric Gesell stated, on behalf of American Tobacco, that the company did not believe that smokers smoke for a certain level of nicotine and adjust their level of smoking when switching between different types of cigarettes to ensure that they get the same amount of nicotine. Gesell PD, Minnesota, 9/18/97, 5:8-25; 6:10-17; 98:21-100:6.

2375. Gesell also said on behalf of American that the FTC Method tar and nicotine yield data "is meaningful, and it was meaningful, and probably still is today." Gesell PD, Minnesota, 9/18/97, 5:8-25; 6:10-17; 107:7-108:6.

g. Lorillard

2376. In 1999, Alexander Spears, CEO of Lorillard, stated publicly that the FTC tar and nicotine numbers did not need to be explained to smokers because it was "very obvious" that they were meaningless due to smoker compensation. Spears PD, Minnesota, 9/23/97, 70:2-72:2.

5. Despite Their Internal Knowledge, Defendants' Marketing and Public Statements About Low Tar Cigarettes Continue to Suggest that They Are Less Harmful than Full-Flavor Cigarettes

2377. As detailed below, Defendants made, and continue to make, false and

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misleading statements regarding low tar cigarettes in order to reassure smokers and dissuade them from quitting. These actions include: assertions that low tar cigarettes deliver "low," "lower," or "less" tar and nicotine than full-flavor cigarettes; claims that low tar cigarettes are "mild" or deliver "clean" taste; and use of brand names with descriptors such as "light" and "ultra light," with full knowledge that consumers interpret these claims and descriptors to convey reduced risk of harm.

2378. Low tar cigarettes have captured an enormous share of the total cigarette market. The percentage of low tar cigarettes (i.e., cigarettes with an FTC-reported tar yield of 15 mg. or less) has increased from 2% in 1967 to 81.9% of total cigarette sales in 1998. (no bates) (U.S. 86655) (FTC, 1994 Report at Table 6A, Table 7); 92382035-2095 at 2057 (U.S. 57179); (no bates) (U.S. 87925 at 8) (FTC, 1979 Report); (no bates) (U.S. 60434 at 22-26) (FTC, 1998 Report).

2379. From the 1960s to the present, Defendants' marketing of their health reassurance brands has featured claims of lowered tar and nicotine accompanied by written statements that implied a health benefit as a result of the lowered tar levels. Defendants have also used marketing imagery, such as lighter color cigarette packaging and white tipping paper, to communicate to smokers that Defendants' health reassurance brands were "lighter" and lower in tar.

2380. Over the last five decades, Defendants have not only introduced numerous standalone cigarette brands that purport to be low in tar (e.g., Merit, Vantage, and Carlton), but have also introduced low tar "brand extensions" of existing full flavor cigarette brands (e.g., Marlboro Lights and Ultra Lights as extensions of the full flavor Marlboro brand). Defendants have used so-called brand descriptors such as "light," "medium," "mild," and "ultra light" to market both their new brands, as well as their brand extensions as low in tar. Virtually every major brand undertook line extensions and by 1980 over 50% of cigarettes sold were "low tar" (with an FTC Method tar yield of 15 mg or less). Dolan WD, 123:21-124:7. Defendants acknowledge that, today, every major manufacturer continues to manufacture and sell low tar brands and brand extensions in both the "light" and "ultra light" categories. Ivey WD, 54:6-17; Bonhomme WD, 8:13-9:18.

2381. Although the FTC does not formally classify cigarettes according to tar or nicotine yield, industry practice, according to Denise Keane, Philip Morris General Counsel, has long been to apply the "light" descriptor to cigarettes with 7 to 14 milligrams of tar, and the "ultra light" descriptor to cigarettes with fewer than 7 milligrams of "tar." These brand descriptors "have been developed by cigarette manufacturers through their advertising." Keane WD, 56:14-23; Mulholland WD, 26:4-27:9; accord Henningfield WD, 56:8-11 (testifying that the FTC has no "control over which cigarettes Defendants advertise as 'light' or 'ultra light'").

2382. The terms "Light" and "Low Tar," as they are used by Defendants, are essentially "meaningless" and "arbitrary." As Dr. Farone explained:

[T]here are lights of certain brands with higher tar levels than regulars of other brands from the same company, and there are also lights and regulars of the same brand that have the same FTC tar rating. So therefore the term "light" is not related to tar or taste. For example, according to the most recent FTC report of tar and nicotine yields, Philip Morris sells versions of Virginia Slims and Virginia Slims Lights that both deliver 15 mg of tar by the FTC method.

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Farone WD, 116:3-14; 525311179-1223 at 1185, 1207-1208, 1222 (U.S. 52977).

2383. The FTC's 1967 report to Congress concluded that Defendants were using the word "mild" in advertising "as a euphemism for cloaking the dangers of increased cigarette smoking." The Report noted, in particular, the following ads:

Carlton filters have "Good mild taste ... created for those who are interested in the amount of tar and nicotine in the smoke of their cigarette...." "Montclair (menthol filter) cigarettes are made especially for smokers who seek exceptional mildness...." "You get Pall Mall's famous extra length of fine tobaccos ... and a filter tip. Result? A new longer length, a full 100 millimeters long and a new milder taste ..." and "(Chesterfield kings) made to taste even milder through longer length."

92382035-2095 at 2058-2059 (U.S. 57179).

2384. In its 1968 report, the FTC concluded that Defendants' use of the phrase "mild taste" in advertising is just another way to communicate the term "less harmful" to smokers:

Advertising in 1966 featured the phrase "mild taste" to describe the satisfactions obtained from smoking and also as a euphemism to cloak the dangers of cigarette smoking. The euphemistic effect derives from the possibility that the public assumes "mild" tasting cigarettes to be less strong, i.e. lower in tar and nicotine than many cigarettes, and hence less hazardous.

TIMN288040-8122 at 8055-8056 (JD 043418).

2385. The 1971 FTC report noted that "[r]elieving anxieties about the risks to health posed by cigarette smoking" was among Defendants' three main advertising themes and that "[c]laims of low tar and nicotine content present yet another appeal to relieve concern about the dangers to health associated with cigarette smoking." In 1975 and 1976 reports, the FTC reported that this theme, used separately or with themes regarding taste or desirable personality characteristics, "continued to predominate in 1975," and "continued to dominate in 1976, with little variation in format and copy except in the greatly increased promotional emphasis given to the lower and lowered 'tar' varieties." 680043553-3595 at 3564, 3567 (U.S. 87922); 1005121108-1119 at 1114 (U.S. 87921); (no bates) (JD 003563 at 4-5) (FTC, 1976 Report).

2386. The 1981 FTC report on cigarette advertising noted, many of Defendants' advertising campaigns had, over the course of the preceding four decades, "impl[ie]d that smoking a particular brand solves the health problem or at least minimizes the risk." The report noted that Philip Morris's Parliament and American Tobacco's (subsequently B & W's) Tareyton cigarettes "imply that their special filters minimize the risks of smoking." The report also cited the advertisements for RJR's Vantage, B & W's Viceroy, and Lorillard's True cigarettes as examples of advertising campaigns implying that the brands marketed are either not harmful or less harmful. (no bates) (JD 004744 at 2-12) (FTC, 1981 Report).

2387. Similarly, the 2001 Institute of Medicine report cited the advertisements of Defendants Philip Morris, RJR, B & W, American Tobacco, Lorillard, and Liggett as examples of advertisements that relate health benefits to particular low tar cigarette brands. (no bates) (U.S. 20919) (Institute of Medicine, Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction) (K. Stratton, et al., eds., National Academy Press 2001); 99053048-3558 at 3124-27 (U.S. 57494).

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2388. The FTC noted in a 1976 report that "[t]he lower and lowered 'tar' and nicotine cigarettes have in the last year been the subject of an intensive promotional effort by cigarette manufacturers." Defendants' spending on the advertising and marketing of low tar cigarettes (i.e., cigarettes yielding 15 mg. or less tar per the FTC Method) has been disproportionately high compared to their domestic market share. The FTC's report for 1997 revealed that for every single year from 1967 to 1992. Defendants' advertising and promotional spending for low tar cigarettes exceeded their domestic market share. According to one marketing expert, low tar cigarettes came to "substantially reshape and define the cigarette market," explaining that:

[T]he real "boom: time for these cigarettes is the late 1970s". In 1974, manufacturers devoted about 15% of their advertising and promotion dollars to these products. By 1979, this spending grew to 67%. At the time, the percent of sales represented by low tar was only 30%, so spending was disproportionately high on these "health reassurance" brands. These products, which accounted for less than 15% of cigarette sales in 1975 came to hold the majority of the market by 1981.

It was not until the mid-1990s that the percentage of sales made by low tar brands finally equaled the amount that Defendants were spending to promote them, which was about 70% of the industry total. HHS1311770-1805 at 1799 (U.S. 76080); Dolan WD, 125:6-126:7.

2389. According to Dr. Henningfield, who among his many other credentials headed the National Institute of Drug Abuse from 1994 to 1996, smokers are not always familiar with the FTC rating of their cigarette, but are aware of whether their cigarettes are "light" cigarettes or "regular." There is little, if any, dispute that consumers believe that "light" cigarettes deliver less tar and nicotine than regular cigarettes, and that consumers believe that regular cigarettes are more hazardous than "light" cigarettes. Henningfield WD, 56:12-57:10.

2390. Relatively few people understand that smoking low tar or light cigarettes can be -and often is—just as dangerous as smoking full flavor cigarettes. Weinstein WD, 54:21-55:20. A peer-reviewed, published study showed that 70% of low tar cigarette smokers believe that such cigarettes decrease one's daily intake of tar. Weinstein WD, 55:5-8 (citing Kozlowski et al., Smoker reactions to a "radio message" that Light cigarettes are as dangerous as regular cigarettes. *Nicotine & Tobacco Research*, 1(1);67-76(1999)). Similarly, another study showed that approximately half of all respondents did not know how many light cigarettes would have to be smoked to get the same level of tar intake as from one full flavor cigarette. Fewer than 10% believed that it would be one light cigarette. Weinstein WD, 55:12-15 (citing Kozlowski, L.T., Goldberg, M.E., Yost, B.A., White, E.L., Sweeney, C.T., Pillitteri, J.L. Smokers' misperceptions of light and ultra-light cigarettes may keep them smoking. *American Journal of Preventive Medicine*, 15, 9-16 (1998) ("Kozlowski, Goldberg, et al., 1998")).

2391. Defendants have used this misperception to their advantage. A 1996 article in the *American Journal of Public Health* cited a 1993 Gallup survey in which 56% of smokers believed use of the term "low tar" conveyed relative safety compared to full-flavor cigarettes. The *American Journal of Public Health* article also cited a 1987 National Health Interview Survey finding that 46% of smokers of cigarettes with tar yields of 6 mg. or lower (per the FTC Method) believed they had

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reduced cancer risk compared with smokers of cigarettes with higher FTC tar yields. 20747597409746 at 9741 (U.S. 43526); accord 99053048-3558 at 3112 (U.S. 57494) (2001 Institute of Medicine study stating "When filtered and low-yield cigarettes were introduced into U.S. markets, they were heavily promoted and marketed with both explicit and implicit claims of reducing the risk of smoking. Even as data accumulated, albeit slowly, that these products did not result in much—if any— decrease in risk, consumers have continued to believe otherwise.... Consumer misunderstanding is explained in part by the ways in which these products are marketed. ... [T]he tobacco companies have appealed to health concerns of smokers at least since 1927. Claims about tar and nicotine levels appeared as early as 1942").

2392. Defendants continue to disseminate false and misleading public statements regarding their true intent in marketing low tar cigarettes. For example, Defendants Philip Morris, RJR, B & W, and Lorillard jointly stated to the FTC in February 1998: "The manufacturers, do not claim that lower-yield cigarettes are `safe' or are `safer' than higher yield cigarettes." Comments of. Philip Morris Inc., RJR Tobacco Co., Brown & Williamson Tobacco Corp., and Lorillard Tobacco Co. on the Proposal Titled FTC Cigarette Testing Methodology Request for Public Comment (62 Fed.Reg. 48,158) at 3, 94 ("Joint Comments") (U.S. 88618).

2393. Defendants have publicly committed to refrain from marketing with implied health claims. In April 1964, the Cigarette Company Defendants adopted the Cigarette Advertising and Promotion Code ("Code"), which includes provisions prohibiting "advertising which makes a representation with respect to health." The Cigarette Company Defendants have claimed publicly that they have obeyed and continue to obey the 1964 Code, last revised in December 1990. Krugman WD, 164:6-21. Each cigarette company Defendant continues to state on its website and in other public statements that it has adopted the Code and that it follows the Code in planning and executing its cigarette marketing. 2070557699-7702 (U.S. 20519); 2025345360-5362 (U.S. 20414); MNAT00608606-8614 (U.S. 78779); TIMN0102493-2494 (U.S. 21271); TIMN0015615-5617 (U.S. 21265); 2022976326-6335 (U.S. 20370); ATX040294056-4056 (U.S. 58599). See Section V(F)(7)(a)((1)) regarding the total lack of enforcement of the Code. More recently, Defendants agreed in the 1998 Master Settlement Agreement not to make "anymaterial misrepresentation of fact regarding the health consequences of using any tobacco product." Section III(r) of the Agreement states:

Prohibition on Material Misrepresentations. No Participating Manufacturer may make any material misrepresentation of fact regarding the health consequences of using any Tobacco Product, including any tobacco additives, filters, paper or other ingredients.

(no bates) (JD-045158) (Master Settlement Agreement, § III(r)).

2394. Defendants also told the FTC in their 1998 testimony: "Smokers are familiar with the ratings produced by the current test method, and continued use of the current test method assures historical continuity of the data. For these reasons, testing under the current FTC test method should continue." Joint Comments at 4.

2395. In response to the FTC's question regarding the need for official guidance on brand descriptors, Defendants stated: "The manufacturers are not convinced that there is a need for official guidance with respect to the terms used in

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marketing lower rated cigarettes." As to terms, such as "light" and "ultra light," "[t]he manufacturers believe smokers understand that these descriptors are terms of comparison rather than signifiers of absolute value." Joint Comments at 94.

2396. In response to the following FTC query:

What data, evidence, or other relevant information on consumer interpretation and understanding of terms such as "ultra low tar," "ultra light," "low tar," "light," "medium," "extra light," and "ultima," as used in the context of cigarettes exists? Do consumers believe they will get significantly less tar from

cigarettes described as "light" or "low tar" than from regular full flavor cigarettes, and do they believe they will get significantly less tar from cigarettes described as "ultra low tar" or "ultra light" than from "light" or "low tar" cigarettes? Do the brand descriptors convey implied health claims?

Defendants Philip Morris, RJR, B & W, and Lorillard jointly stated in their joint comments to the FTC:

The manufacturers believe that consumers choose "light" or "ultra" products for a variety of reasons, including lighter flavor, lighter taste, less menthol (or other flavor) taste, and smoother smoking characteristics. Some consumers may choose such products for other reasons. The manufacturers do not intend the descriptors to convey any level of 'safety' with regard to their products.

Defendants' joint comments further stated: "The manufacturers are not aware of evidence that consumers use descriptors in lieu of the FTC numbers as their primary source of information about the tar' and nicotine yields of different brand styles." Joint Comments at 95.

2397. In response to the FTC's question:

What available evidence exists concerning how consumers view cigarettes with relatively low tar and nicotine ratings and their perception of the relative risks of smoking such cigarettes rather than full flavor cigarettes?

Defendants Philip Morris, RJR, B & W, and Lorillard jointly stated:

The manufacturers are unaware of evidence concerning such consumer views and perceptions except to the extent that such evidence is presented in [the National Cancer Institute's Smoking and Tobacco Control Monograph No. 7].

Joint Comments at 89.

2398. Defendants' testimony to the FTC fails to make any reference to the vast amounts of consumer research Defendants conducted, and had conducted for them by their numerous advertising and marketing consultants, that expressly found that many consumers strongly disliked the taste of low tar cigarettes, but were smoking them because they believed they were healthier for them. Accord 2041186475-6517 at 6478, 6504 (U.S. 22181*) (November 29, 1994 submission to the National Cancer Institute on behalf of B & W, American Tobacco, Lorillard, and Liggett contending that smokers use FTC tar and nicotine ratings primarily for information relating to taste considerations, referring to what Defendants called "the well-established significance of the FTC's machine-determined yields for comparing the flavor, richness and satisfaction of different brands of cigarettes," and predicting that if modifications to the FTC Method occurred, "[c]onsumers . . . would be deprived of important information about the flavor, taste and feel of cigarettes information consumers consider to be highly relevant in distinguishing among" brands).

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2399. As detailed below, Defendants' public statements about low tar cigarettes on their websites, the statements of their executives, and their internal documents are false and misleading.

a. Philip Morris

(1) Philip Morris's Low Tar Cigarette Marketing Techniques

2400. Over the last 50 years Philip Morris has used a variety of marketing techniques to reassure smokers that certain brands and types of cigarettes would reduce their health risk from smoking by reducing their exposure to tar. Philip Morris advertisements in the early 1950s made explicit claims of reduced harm, such as the following:

1952: "If, like millions today, you are turning to filter cigarettes for pleasure plus protection ... it's important that you know the Parliament Story." 696000888-0916 at 0894, 0905, 0908 (U.S. 21387); Harris WD, 70:3-6.

1952: "Parliament's exclusive Filter Mouthpiece gives you the important extra protection of the Parliament 'Safety-Zone' Construction. ... As the irritants, brown tars and colorless nicotine are trapped, they remain where they belong-in the recessed filter, completely out of contact with your lips." 696000888-0916 at 0894, 0905, 0908 (U.S. 21387)

1954: "You're So Smart to Smoke Parliaments." (U.S. 2731) (emphasis in original); see also (U.S. 2756) (1956 Parliament advertisement in Sports Illustrated magazine

noting same).

1954: "The cigarette that takes the

FEAR out of smoking!"

696000888-0916 at 0908 (U.S.

21387).

2401. In addition to making explicit health claims, since the 1970s Philip Morris has used brand descriptors such as "light" and "ultra light" to communicate that certain brands of cigarettes are low in tar and nicotine. James Morgan, who was Brand Manager of Marlboro from 1969 to 1972, during the time when Philip Morris introduced Marlboro Lights, its first "light" cigarette, explained the intended meaning of the "lights" descriptor. Morgan stated that, from the very beginning, the "lights" descriptor was intended to communicate that the brand was low in tar—as opposed to a brand that was lighter in taste:

From the very beginning the phrase, "Lowered tar and nicotine" was going to be on the package [of Marlboro Lights]. That was the phrase that described to the consumer what the product was in our judgment . . . We felt the brand name, Marlboro Lights, was a real help in terms of the description of the product being low in tar and nicotine which appeared on the pack from the inception of the project.... We are not talking, in my judgment, talking about light ... as a taste. It's not a term that means anything in terms of taste, and the name Marlboro Lights as I said before, a word which we feel has appeal in a different sense than suggesting what the cigarette even tastes like.... It was our desire in this entire Marlboro Lights brand project to constantly position Marlboro Lights as being—as having lower tar and nicotine from Marlboro [Reds].

Morgan PD, Philip Morris Inc. v. R.J. Reynolds Industries, Inc., 10/15/74, 4:9-10; 10:15-11:4; 78:20-79:14; 79:25-80:5; 81:8-12; 85:23-86:4; Morgan PD, Philip Morris Inc., 11/25/74, 247:11-14.

2402. According to Morgan, Philip Morris made a calculated decision to use the phrase "lower tar and nicotine" even

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though its own marketing research indicated that consumers interpreted that phrase as meaning that the cigarettes not only contained comparatively less tar and nicotine, but also that they were a healthier option. Morgan PD, Price v. Philip Morris, Inc., 6/15/02, 45:2-45:25, 45:2-46:25, 47:2-47:25, 48:2-48:25, 49:2-49:25, 50:2-50:25, 51:2-51:5, 52:15-52:20.

2403. Morgan, who later became CEO of Philip Morris, further explained in 2002 that rather than relying on the tar and nicotine numbers from the FTC Method, "the major influence in people's perceptions in the tar of a cigarette would have come from the marketing positioning of a brand as opposed to people literally reading the FTC [tar and nicotine figures]." Morgan also stated that,

if you took the advertising, the point of sale, whatever may have been said on the racks or the cartons, the whole panoply of what the consumer saw about a cigarette brand would be more influential in that consumer's perception of the tar of that brand ... than the fact that they may or may not have sat down and looked at a newspaper that had the latest Federal Trade Commission report.

Part of the image that Philip Morris was marketing was the concept of lowered tar and nicotine. Morgan PD, Philip Morris Inc., 11/25/74, 174:10-175:4; 175:16-175:25.

2404. Jeanne Bonhomme, Director of Consumer Insights for Philip Morris, echoed these views:

Philip Morris aims its low tar cigarette marketing at least in part at smokers of regular cigarettes who are concerned about the amount of tar they are inhaling and want to reduce it Philip Morris was aware that consumers understood the "lights" brand descriptor from its advertising and marketing pieces to be equated with low tar.

Bonhomme WD, 12:6-11; 13:17-19; 15:1-4; 16:1-7; 43:11-14.

2405. In or around 1995, Philip Morris considered changing the name of Merit to Merit Lights, because "Philip Morris was concerned that consumer research showed that Merit marketing no longer effectively conveyed to consumers that Merit was low in tar." Bonhomme WD, 13:1-22.

2406. This contemplated name change is documented in a June 23, 1995 internal Philip Morris memorandum, titled "Merit 'Filter' vs. 'Lights' Test—Research Proposal," from Lauren Schwed, Philip Morris Analyst, to Jodi Sansone, then Brand Manager for Merit at Philip Morris USA, and Rebecca Gordon, a Philip Morris USA Assistant Brand Manager under Sansone. The memorandum described the motivation behind an attached consumer research study as follows:

Merit is considering changing the name on the Parent pack from "Filter" to "Lights" in order to clarify the tar level of the cigarette. There is a thought that changing the wording on the pack to replace the word "Filter" with the word "Lights" would help clarify what the true tar level is for Merit Parent. However, there is some concern that changing the name to "Lights" could possibly detract from the brand's flavor heritage.

2045628330-8330 (U.S. 26955).

2407. In a memorandum dated November 27, 1995, Shari Teitelbaum, a consumer researcher for Philip Morris, summarized the results of the "Merit 'Filter' vs 'Lights'—Final Report" for Sansone. Teitelbaum noted that the name change affected Merit smokers' perceptions: "Before tasting the cigarette, Merit smokers seemed to think that Merit Lights was lower in tar than Merit Filter." Teitelbaum noted that changing the name to Merit Lights caused one third of current Merit smokers to "alter their perception of

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Merit in terms of taste and tar level." The study also confirmed Philip Morris's fear that changing the name to Merit Lights would imply a poor-tasting cigarette: for current Merit smokers, "[t]he name change did seem to have a significantly adverse impact on perceptions of the brand's taste." 2045596010-6012 at 6011 (U.S. 26952); 2045596013-6040 at 6032 (U.S. 26953); Bonhomme WD, 14:1-15:4.

2408. Philip Morris did finally change the name of Merit Filters to Merit Lights, even though there was no difference in the cigarette. Brennan-Lund PD, Price v. Philip Morris, Inc., 9/20/02, 157:15-22.

2409. Similarly, Philip Morris marketed a 15 mg. cigarette as both Virginia Slims and Virginia Slims Lights. 525311179-1223 at 1222 (U.S. 52977).

2410. Jeanne Bonhomme verified that Philip Morris has known for years from its consumer research that some smokers "interpret brand descriptors as communicating a less hazardous cigarette than full-flavor brands." Bonhomme WD, 20:3-6.

2411. In an October 21, 1994 memorandum, titled "Marlboro Medium Smoker Image Study," Marian Halpern, an employee in the Philip Morris consumer marketing research department, reported to Tom Keim, a Philip Morris brand manager, that the "Reasons for Smoking Medium" were as follows:

Most smokers said they chose Medium because of its perceived health benefit. Over half of the Medium smokers said they started smoking Medium because they wanted a cigarette with lower tar and nicotine (56%). For many respondents, the name "Medium" communicated information on this product feature, with almost one quarter (24%) of these smokers saying that 'Medium' refers to the cigarette's lower tar and nicotine.

2063731671-1688 at 1672 (U.S. 22222); Bonhomme WD, 18:1-19:5.

2412. Philip Morris tries to create marketing pieces that communicate certain brands are low in tar, not just with words like the "lights" brand descriptors, but also with the imagery they present to consumers, such as the color it selects for the cigarette pack and tipping paper. When packaging decisions are made at Philip Morris, it is recognized that the color influences peoples' perception of the strength and tar level of the product. Bonhomme WD, 20:10-17; 22:1-4.

2413. For example, Philip Morris knows that consumers perceive a blue cigarette pack and white tipping paper as an indication that a cigarette is low in tar, and that generally speaking, the lighter the cigarette package color, the lower its tar content is perceived to be by consumers. Philip Morris continues to this day to market and sell Marlboro Lights and Marlboro Ultra Lights with lighter color packaging and tipping paper. Bonhomme WD, 21:13-18; 23:20-22.

2414. Nancy Brennan-Lund, Philip Morris Senior VP of Marketing, confirmed that, in order to communicate low tar in cigarettes, Philip Morris USA has used a "lighter, more white background" and a "white filter as opposed to a cork colored filter." Susan Norris, Marlboro Brand Manager from 1995-1999, also noted that, in her experience, colors such as silver and light blue communicate to consumers that a cigarette is an ultra light brand. Brennan-Lund PD, Price, 9/20/02, 179:6-17; Norris PD, United States v. Philip Morris, 7/31/03, 162:6-165:8, 179:17-184:19.

2415. Over the last five decades, Philip Morris has conducted extensive consumer research to perfect the delivery of its "light" and low tar cigarette brand marketing message to ensure it provided

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smokers with health reassurance and offered an alternative to quitting.

2416. Marlboro Lights. With respect to Marlboro Lights, Philip Morris designs the packaging to distinguish it from Marlboro Red and communicate to consumers that it provides "the best of both worlds,"—low tar and good taste. Bonhomme WD, 22:5-18.

2417. A November 15, 1971 "Philip Morris U.S.A. Inter-Office Correspondence" to James Morgan from the Philip Morris USA Marketing Research Department set forth results of a Philip Morris consumer study on Marlboro Lights. Under the heading "Advertising Awareness," the report stated that "[l]ow tar and nicotine remained the most frequently mentioned comment." 10002927442762, 2745 (U.S. 35205).

2418. A December 1971 Marlboro Lights "Product Promotion Plan" distributed to the Philip Morris sales force discussed the introduction of Marlboro Lights and ways to market and maximize sales of the brand. It stated:

The introduction of Marlboro Lights is a very timely move on the part of your company. The consumer is becoming increasingly aware of tar and nicotine contents in cigarettes and many are searching for one with low tar and nicotine content and full flavor. Marlboro Lights fill this need.

2045404133-4163 at 4141 (U.S. 85000).

2419. A retrospective Philip Morris document dated September 1991, titled "Background Information on PM Brands," stated:

To capitalize on the booming low tar market, Marlboro Lights was introduced in 1972. It became the first successful low tar line extension in the industry . . . Marlboro further broadened its appeal to low tar smokers with the addition of Marlboro Lights 100's in 1978, Marlboro Lights King Size Flip-Top Box in 1980 and Marlboro Lights 100's Flip-Top Box in 1984.

2070143190-4433 at 3206 (U.S. 27257).

2420. James Morgan, former President and CEO of Philip Morris USA, confirmed that Marlboro Lights were positioned as "lower in tar and lighter in taste than Marlboro Red" and were marketed to people seeking a low tar and nicotine cigarette, including smokers of both high and low tar cigarettes. A 1974-1975 Philip Morris magazine advertisement for Marlboro Lights stated: "Marlboro Lights. The spirit of a Marlboro in a low tar cigarette." Philip Morris has used the phrases "lowered tar and nicotine" and "Lights" in association with Marlboro Lights for over 30 years. Morgan PD, Price, 6/5/02, 20:13-25, 21:2-6, 32:22-25, 33:2-25, 34:2-11; 2045404133-4163 (U.S. 85000); 03496228-6630 at 6323 (U.S. 20057); Morgan TT, Price v. Philip Morris, Inc., 2/18/03, 64:4-7.

2421. A May 31, 1988 Philip Morris USA Marketing Research Department report from Philip Morris's primary advertising agency, Leo Burnett, and Philip Morris consumer researchers Karen Eisen and Jeanne Bonhomme, recited focus group results and stating that "many felt that Marlboro Lights was gaining in favor because of health concerns." 2044743883-3891 at 3885 (U.S. 85001); Brennan-Lund PD, Price, 9/20/02, 190:1-192:11; Bonhomme WD, 23:5-19.

2422. Benson & Hedges. A 1974-1975 advertisement for Philip Morris's Benson & Hedges Multifilter brand stated: "Today people not only want a great tasting cigarette, but one that's low in `tar' and nicotine. Nothing's simple anymore . . . [w]e've managed to lower the `tar' and nicotine and still give you a cigarette with full rich flavor for you to enjoy." (U.S.

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87184); see also 03496228-6630 at 6326 (U.S. 20057).

2423. A September 1991 Philip Morris document, titled "Background Information on PM Brands," stated:

Benson & Hedges 100's Lights and Lights Menthol were introduced in 1977 in response to consumer preference for a milder, lower tar cigarette ... today Benson & Hedges is among the leading low tar cigarettes. In mid-1982, Benson & Hedges Deluxe Ultra Lights was launched to take advantage of dynamic growth in both the 100mm and ultra low tar markets. The regular and menthol packings, both at 5mg tar, were instant successes. Fueled by distinctive packaging and taste richer than that of other ultra low (hence the ad slogan "rich enough to be called deluxe"), Deluxe Ultra Lights is a major contributor to the image and sales strength of Benson & Hedges.

2070143190-4433, 3211-3214 (U.S. 27257); see also ADV004 1118-1120 (U.S. 745) (1982 advertisement).

2424. Cambridge. Tom Goodale's handwritten notes from an October 15, 1979 meeting, the regular "new products" meeting of Philip Morris scientists, reflect Philip Morris's plan to create an impression in consumers' minds of Cambridge as being extremely low in tar. The plan was to introduce Cambridge with a tar level below the then-lowest FTC tar brand sold—Carlton—and then to raise the tar level over time. The notes reveal, under the heading Project Trinity (Cambridge's project name prior to commercial introduction), "Hit mkt [market] below Carlton tar—afterwards can drift higher." 1001507595-7596 at 7595 (U.S. 85102).

2425. According to Dr. Farone, former Director of Applied Research at Philip Morris USA, based on his participation in numerous monthly meetings in 1979 relating to Cambridge:

The long-range plan [for marketing Cambridge] was to introduce the product as a low tar product and then eventually to increase the tar of the product.... [I]t was anticipated that the product would not sell very well at that low tar and eventually they would increase the tar, and having sold it as a low tar product people still would think of it as a low tar product. In my view, and from my experience, the lowest yielding version of many brands, including the original Cambridge, but also B & W's Carlton, RJR's NOW, etc., were created to give the brands a lowest tar image, while the sales are in the higher tar and nicotine versions of those brands. Those lowest yield versions of the brand are very hard to find in stores.

Farone WD, 2:2-8; 2:15-19; 128:4-128:22.

2426. In 1979, Philip Morris promoted Cambridge as a low tar brand yielding 0.0 mg tar (less than 0.1 mg tar) on the FTC test. The 0.0 mg tar Cambridge cigarette was removed from the market and replaced by Cambridge light and ultra light brands, all of which had considerably more tar than, the original Cambridge cigarette. Dr. Farone made it clear that:

The plan all along was to deceive the public into thinking that the Cambridge Light cigarette was a low tar cigarette, when in fact it was not ... the trend to increasing tar deliveries in the product is very clear and there is no advertising that says that such increases are being made.

Farone WD, 129:18-132:17; 2024983860-3862 at 3860 (U.S. 20015).

2427. Dr. Farone explained that "Philip Morris never even bothered to consumer test the 0.0 mg [Cambridge] version against the similar variant of Carlton and

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this is a major piece of evidence that they had no plans to keep it on the market." A September 20, 1979 Philip Morris memorandum, titled "Project Trinity," states that with respect to the 0.0 mg tar version of Cambridge: "Consumer testing is not required for this model." Farone WD, 128:23-129:17; 1000774422-4422 (U.S. 35306).

2428. Nancy Brennan-Lund, Senior Vice President of Marketing at Philip Morris, admitted that Cambridge Lights had more tar and nicotine than the original Cambridge. She further admitted that, as the tar and nicotine numbers were not identified on the packs of Cambridge Lights cigarettes, the only way consumers could possibly know that Cambridge Lights had more tar than Cambridge regular was by a perceived taste difference. Brennan-Lund PD, Price, 9/20/02, 145:5-154:16.

2429. Merit. In 1976, Philip Morris introduced a new brand, Merit, at 9 milligrams tar with "enriched flavor." Merit formed the basis for line extensions to Merit Ultra at 4 milligrams and later Merit Ultima at 1 milligram. The three were jointly advertised in a "low, lower, lowest" presentation of the product line. Dolan WD, 124:1-4; 1002325022-5022 (U.S. 21510).

2430. Philip Morris's marketing for some of its low tar cigarette brands, including Merit, "encouraged consumers [whom Philip Morris referred to as potential 'down-switchers'] to switch from regular cigarettes to low tar cigarettes." Historically, "Philip Morris targeted potential down-switchers with its marketing for Merit," and "Merit [consumer] research is used to target potential down-switchers." Bonhomme WD, 13:4-5; 27:16-21; 29:3-30:5.

2431. Philip Morris's marketing for Merit cigarettes targeted "self-conscious" and "uncomfortable" smokers. A Philip Morris memorandum, titled "The Uncomfortable Merit Smoker," dated January 6, 1993, stated: "'Self-conscious' smokers are defined as people who are uneasy with their status as smokers. They see smoking as a sign of personal weakness and are starting to feel ashamed that they smoke." 2044905001-5007 at 5001 (U.S. 20454); Bonhomme WD, 49:1-3:47:8-11; see also, Teitelbaum PD, United States v. Philip Morris, 4/16/02, 132:21-137:21.

2432. According to Suzanne LeVan, Philip Morris Vice-President of Premium Brands from 1991-2001 with responsibility for Merit, "the Merit strategy is to convince smokers who are switching down [in tar levels] and who are looking for a good tasting cigarette that Merit is a brand that they should try." LeVan PD, United States v. Philip Morris, 6/25/02, 178:13-181:2; accord 2063690017-0018 (U.S. 85002).

2433. According to a retrospective Philip Morris document dated September 1991 and titled "Background Information on PM Brands," the "Benefits Statement" of Merit was: "You'll enjoy low tar and good flavor with Merit." "At only 7 mg. of tar, Merit delivers the rich flavor of leading cigarettes with twice the tar." "With Merit Menthol you get rich menthol flavor at only 8 mg tar." The document indicated that Merit Ultra Lights and Merit Ultra Lights 100's were introduced in 1981. 2070143190-4433 at 3211:3214 (U.S. 27257); accord 2063724711-4714 (U.S. 39838) (Confidential).

2434. Philip Morris's targeting strategy was recorded in a retrospective June 13, 1995 document from Leo Burnett— Philip Morris USA's long-time marketing agency—titled "Merit Advertising Overview Historical and Current for Jodi Sansone." Under the heading "Merit -Current

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'You've Got Merit' Campaign," the document stated: "Strategy: Convince Self-conscious and uncomfortable smokers who want to switch to a low tar alternative but won't sacrifice taste completely," "With Merit, you can switch down to lower tar and still enjoy smoking," "Because: Merit delivers satisfying taste at every level of low tar." The document described the "Merit Brand Essence" as follows: "Since the brand's introduction twenty years ago, the core Merit proposition has been low tar with good taste. Once a smoker has made the decision to switch to a lower tar product, they are faced with the challenge of finding one that delivers on taste. Merit offers a positive solution—they can switch down to lower tar and still get satisfying taste." 2048200699-0727 at 0708 (U.S. 38648) (emphasis in original); Bonhomme WD, 48:12-49:3.

2435. Philip Morris's strategy for Merit was successful. Norma Suter Drew, Philip Morris Vice President for Portfolio Brands and former Brand Manager and Marketing Director for Merit cigarettes from 1992-1994, delivered a July 1993 presentation, titled "Merit Franchise," in which she reported that "Merit is a brand smokers switch to in order to reduce tar/nicotine." Elsewhere in the presentation, Drew wrote that one of the top two "Goals" for Merit advertising was to achieve a "[s]ignificant increase in Merit's highest brand image statement, 'Are among the lowest in tar/nicotine', versus Carlton and Now." The presentation also noted that "70% of industry switching is between tar levels." Under the heading "Merit Advertising," the presentation noted that "Merit smokers tell us that they come to the franchise because they desire a lower tar cigarette that still tastes good — switching down makes them feel better about the fact that they smoke." Bonhomme WD, 49:4-14; 2070661683-1727 at 1685, 1687, 1713, 1716 (U.S. 40337) (emphasis added).

2436. The following Merit advertisements, in conformity with the internal marketing documents detailed above, communicated to consumers that, with Merit, they could reduce their tar intake and thus reduce their health risk, without sacrificing taste:

1976: "New Low Tar Entry Packs Taste

of Cigarettes Having 60% More

Tar." (no bates) (U.S. 5087).

1976: "The greatest challenge to cigarette-makers

in the last two decades

has been how to make a low

tar cigarette that wasn't 'low'; in

taste. It seemed impossible.

Until now. After twelve long,

hard, often frustrating years,
 Philip Morris has developed the
 way to do it. The cigarette is
 called MERIT. It delivers only 9
 mg. tar. One of the lowest tar
 levels in smoking today." (no
 bates) (U.S. 4981); Biglan WD,
 203:17207:3.

1977: "New MERIT 100's. Only 12 mg.
 of tar. Yet packed with extra flavor.
 The kind of flavor that
 makes 'low tar, good taste' a reality,
 for 100's smokers." (no bates)
 (U.S. 5342); Biglan WD, 203:17-207:3.

1978: "Merit Solving Smoker Dilemma."
 (U.S. 5704); Biglan WD, 203:17-207:3;
 (no bates) (U.S. 5483).

1978: "'Best Move Yet.' MERIT['s]
 ability to' satisfy over long
 periods of time could be the most
 important evidence to date that
 MERIT is what it claims to be:
 The first real alternative for high
 tar smokers." (no bates) (U.S.
 5951); see also (no bates) (U.S.
 6112); (no bates) (U.S. 6131);

Biglan WD, 203:17-207:3.

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1978: "Research concludes MERIT
taste makes move from high tar
to low tar smoking unexpectedly
easy." (no bates) (U.S. 5803);
Biglan WD, 203:17-207:3.

1988: "You Won't Miss What You'll
Miss." (no bates) (U.S. 8505).

1988: "Our Less Is Your Gain." (no
bates) (U.S. 8556).

1989: "Smoke This Page. If That Reminds
You of Your Ultra Lights,
Read This Ad." (no bates) (U.S.
8711).

1994: "You can do it! You really can
switch down to lower tar and enjoy
satisfying taste." (no bates)
(U.S. 12892); Biglan WD, 203:17-207:3;
970469347-9474 at 9421;
(no bates) (U.S. 85104).

1994: "Yes you can! You can switch
down to lower tar and still get

satisfying taste. You've got

MERIT." (no bates) (U.S. 9241)

(emphasis in original); Bonhomme

WD, 30:6-18.

2437. A September 16, 1987 Leo Burnett U.S.A. research report for Philip Morris, titled "Merit Brand Image Study," noted in the section "Attitudes Toward Smoking" that "[w]hile health concerns are motivating factor, taste/enjoyment are still key." A summary at the end of the report stated: "Merit smokers we sampled are committed smokers ... However, they have mixed feelings about smoking—health concerns/loss of control . ." and their switching to Merit "provides health reassurance." 2072735414-5500 at 5431, 5492 (U.S. 41598); Bonhomme WD, 27:22-28:17.

2438. A January 1991 document, titled "Merit Positioning Study," assessed "perceptions of Merit's positioning within the low tar category." Under the heading "What Down Switchers want in a cigarette," the document noted that approximately half of downswitchers found "very low tar" (50%) and "very low nicotine" (48%) to be "absolutely essential." 2048976844-6906 at 6850, 6890, 6892 (U.S. 85004).

2439. Consumer feedback confirmed the successful delivery of Philip Morris's intended message. An August 1991 report prepared for Philip Morris, titled "Merit Positioning Strategy Development," observed that, "[i]n addition to advantages associated with lesser tar and nicotine delivery, low tar users note that such brands allow higher volume, deeper inhalation smoking with few tradeoffs." The report also commented that Ultra Light users "note their further downswitching to ultra-lights from lights for health benefits primarily." The report noted that Merit users "like perceiving [Merit cigarettes] as rather safe, sensible, middle-of-the-road, non-threatening, and generating the feeling that they aren't doing anything wrong." 2072735123-5247 at 5131, 5132 (U.S. 41596).

2440. An internal Philip Morris memorandum dated May 16, 1995 from Lauren Herman, an employee in the market information and planning group, to Norma Suter Drew, then acting Brand Manager for Merit cigarettes, titled "Merit Alternative Campaign Qualitative Exploratory—Final Report," discussed the results of research conducted to gauge consumer interest and appeal of Merit marketing campaigns. Under the heading "Key Findings," Herman reported that "Competitive smokers appear to be most likely to respond to the concepts that offer the clearest product cues. These smokers require the most rational reason why they should smoke Merit, (e.g. lower tar)." Under the heading "Implications," Herman recommended that "[s]ince low tar is essentially the core of these alternative concepts, the low tar

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message should be more pronounced." 2063724960-4962 at 4960, 4962 (U.S. 39842).

2441. A September 4, 1996 Leo Burnett document reported on an August 27, 1996 meeting held in New York between Leo Burnett and Philip Morris (Jose de Castro, Suzanne LeVan, and Jodi Sansone) to discuss Merit marketing for 1997. The document acknowledged that past Merit marketing focused more heavily on communicating that it is low in tar, and less on sending a message about the brand's taste.

Under the heading "Discussion/Agreements Reached," the document stated: "Client/agency agreed that we need to move the bar forward in terms of taste communication, as currently it is not as recognizable/prominent as low tar in Merit awareness ratings, yet it is a key driver of consumer choice/purchase." 2071522201-2203 at 2201 (U.S. 27299).

2442. A February 9, 1998 draft research report prepared for Philip Morris by the research firm Kane, Bortree & Associates, titled "Merit Strategic Revitalization Plan, Stage I Learnings," analyzed ways to "build Merit's share of the low tar segment." 2063687348-7527 at 7350, 73537356 (U.S. 39820*); see also 2063686921-6942 at 6934 (U.S. 88629) ("Kane Bortree makes use of a variety of innovative, psychologically derived techniques. These techniques allow us to get inside the consumers' heads"). The 1998 report discussed two types of low tar smokers who find the taste of light cigarettes unsatisfying and do not feel comfortable smoking: "Quitters" and "Validation Seekers." The report cited Merit Ultima, Merit Ultra Lights, Camel Lights, and Marlboro Ultra Lights as brands for those who do not feel comfortable smoking. 2063687348-7527 at 7356, 7357, 7359 (U.S. 39820*).

2443. The February 1998 draft research report was followed by a March 31, 1998 draft report by Kane, Bortree & Associates, titled "Merit Strategic Revitalization Plan, Stage II Learnings/Stage III Recommendations." Under the heading "Positioning Learnings to Date," the March report noted that "'Light' is a bigger promise than low-tar with opportunity for broad appeal" because it conveys "Tastes light," "Feels light," "Low tar," and "Better for you." The report recommended that Merit's "positioning should convey acceptability of smoking." The report further discussed a contemplated "Additive Free" Merit line extension, and noted that: "Additive-free is an excellent fit with 'light' because it "[r]einforces 'better for you.'" 2080486996-7108 at 7010-12 (U.S. 45330); Bonhomme WD, 17:2-16.

2444. A May 14, 1998 internal Philip Morris document, titled "Merit Brand Initiatives," incorporated the findings of the March 31, 1998 Kane, Bortree & Associates study, recreating that study's representation of the four segments of the lights market and stated, under the heading "Merit Strategic Positioning Copy Strategy": "What we would like smokers to believe—Merit offers a viable alternative to Light brands with full flavor heritage." 2070657640-7650 at 7644, 7646 (U.S. 22015).

2445. Marlboro Ultra Lights. A June 1979 draft report prepared for Philip Morris by Goldstein/Krall Marketing Resources, Inc., titled "Smokers' Reactions to an Ultra Light Brand Extension for Marlboro," discloses that Philip Morris began conducting consumer marketing research on a new cigarette line extension of the Marlboro brand, Marlboro Ultra Lights, as early as 1979. Discussing the reactions of Marlboro Red smokers to the concept of Marlboro Ultra Lights, the report stated:

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The introduction of a Marlboro Ultra Light brand appeared to be viewed in the following manner: ... An attempt to produce a safer cigarette for those interested in cutting down their smoking and in a lighter cigarette A "smart" way to prevent the loss of or switching of Marlboro smokers to other brands if they are currently unsatisfied in their quest for a lighter/safer cigarette.

2041097977-7999 at 7984 (U.S. 85006); Bonhomme WD, 31:10-34:17.

2446. Under the heading "How Marlboro Ultra Lights Were Positioned," the report stated: The following is a description of a brand image developed from the discussions [with consumers] in all three groups: ... Safer cigarette—less tar and nicotine.... Probably a "better/innovative filter." The report

further stated: "With regard to smoker image, respondents suggested: ... People cutting down for health reasons/people trying to quit. More concerned people (about health). More aware people (those reading the numbers in the ads)." 2041097977-7999 at 7987 (U.S. 85006).

2447. On May 1, 1989, Philip Morris began test marketing Marlboro Ultra Lights, which it positioned as delivering 6 mg. of tar (per the FTC Method). In a February 8, 1989 internal Philip Morris memorandum, Richard Camisa delivered to colleagues at Philip Morris the "Marlboro Ultra Lights Marketing Plan Overview." The overview set forth the target audience for Marlboro Ultra Lights, noting that

[c]onsumer research suggests that there are vast numbers of smokers, including Marlboro smokers, who are seeking lower tar but who are also unwilling to sacrifice flavor and/or smoking satisfaction in return. The opportunity for Marlboro lies in its ability to offer smokers the lower tar they seek with less trade off in taste.

2070624747-4763 at 4748 (U.S. 22014).

2448. The document further stated: "A blue/gray pack with white tipping . . . provides traditional ultra low tar reassurance." Jeanne Bonhomme, Director of Consumer Insights for Philip Morris, confirmed that "low tar reassurance," as used in the document, referred to the fact that:

Within the context of selecting a pack color for Marlboro Ultra Lights there was discussion about what pack color would make it readily apparent that the brand was an ultra low tar. Many of the lights and low tar products used blue packaging as a signal of being lower tar, so there were discussions about making sure that advertising and packaging easily communicated that Marlboro Ultra Lights was an ultra low tar.

2070624747-4763 at 4748 (U.S. 22014); Bonhomme WD, 64:1-6.

2449. Philip Morris conducted research to determine how cigarette pack and tipping color influenced consumer perceptions of Marlboro Ultra Lights' strength and tar level. In a June 25, 1990 memorandum from Jeanne Bonhomme, then a contract consumer marketing researcher for Philip Morris, to Richard Camisa, titled "Marlboro Ultra Lights Portfolio Test," Bonhomme reported the results of a cigarette ad pack test conducted on consumers for Marlboro Ultra Lights. Bonhomme reported that for consumers tested, "[p]redictably, expectations about [Marlboro Ultra Lights'] strength and tar level were influenced by the pack and tipping color. Red/Cork was viewed as being strongest tasting and higher in tar than the two white tipped options, particularly Blue/ White." 2070197338-7340 at 7338 (U.S. 40255); Bonhomme WD, 21:4-22:4; see also 2071535027-5090 at 5033, 5043 (U.S. 22020).

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2450. Marlboro Ultra Lights was launched nationally on January 28, 1998, and Philip Morris continues to market and sell Marlboro Ultra Lights to this day. Philip Morris targeted all Marlboro smokers with Marlboro Ultra Lights, not just current low tar smokers. Norris PD, United States v. Philip Morris, 7/31/03, 132:17-23, 162:6-165:8, 121:13-125:11; Bonhomme WD, 34:15-17.

2451. Marlboro Medium. In June 1991, Philip Morris launched Marlboro Medium, a lower tar line extension of the Marlboro brand. A September 1991 Philip Morris document, titled "Background

Information on PM Brands," stated that Marlboro Medium was aimed at "consumers still looking for a satisfying low tar cigarette with flavor." 2070143190-4433 at 3206 (U.S. 27257).

2452. Philip Morris's November 1994 continuous smoker tracking survey (a random smoker phone survey Philip Morris has conducted continuously since the 1980s) discusses Philip Morris's targeting of health-conscious smokers. The document stated that male smokers of Marlboro Medium age 18-24 "need affirmation as smokers" and may be candidates for ultra lights. In this survey, Philip Morris created a profile of 18-24 year old male Marlboro Flavor Low (Marlboro Medium) smokers as individuals who are less comfortable with smoking, feel pressure to quit, and do not enjoy some of the "image benefits" to the same degree as other smokers. The Marlboro Flavor Low (Marlboro Medium) male smokers age 18-24 are more likely to cite the low tar level as influential in determining their regular brand. 2048735500-5604 at 5562, 5543, 5548-5549 (U.S. 21971).

2453. An internal February 10, 1995 Philip Morris memorandum from Marian Wood to Tom Keim, titled "Marlboro Medium Brand Imagery," revealed that in 1991, Philip Morris spent \$50 million on advertising for Marlboro Medium, 36% of Marlboro's total advertising budget for that year. 2063731689-1710 at 1695 (U.S. 79820).

2454. Philip Morris continues to sell Marlboro Medium. Bonhomme WD, 20:1-2.

2455. Parliament. Philip Morris marketed the Parliament brand as a low tar brand featuring a "recessed" filter. A Philip Morris document, titled "Background Information on PM Brands," dated September 1991, stated:

It was during the proliferation of filtered cigarettes in the 1950's that Philip Morris gave Parliament its hallmark of today—the recessed filter. Unlike ordinary filter tip cigarettes, Parliament's famous recessed filter kept tar from touching the smoker's lips. Since the addition of this unique filter, Parliament smokers have enjoyed their brand's approach to smoking: clean, sophisticated, and distinctive. In 1979, Parliament's name was changed to Parliament Lights. This change reflected the brand's low tar status and helped capitalize on a growing low tar trend.

A "Benefit Statement" in the document was: "Parliament Lights—since tar on the filter tip never touches your lips, the taste is refreshingly light." 2070143190-4433 at 3217-3218, 3222 (U.S. 27257).

2456. A 1975 Parliament advertisement in Sports Illustrated magazine stated that, although cigarette holders gave "cleaner taste," there was "kilo need for a cigarette holder today. Parliament's filter is recessed, so you taste only rich, clean tobacco flavor. It's the neatest trick in smoking." (U.S. 4709); see also (no bates) (U.S. 4885).

2457. A 1977 Parliament advertisement in Cosmopolitan magazine stated:

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As you smoke, tar builds up on the tip of your cigarette filter. That's "filter feedback." Ordinary flush-tipped cigarettes put that tar build-up against your lips. And that's where Parliament has the advantage. Parliament's filter is recessed to keep tar buildup from touching your lips.

ADV029 0247-0249 (U.S. 10614).

2458. As noted in the 1981 FTC Report on cigarette advertising, Philip Morris's Parliament advertisements from the time period preceding the Report (i.e., late 1970s-1981) implied that its "special filters minimize the risks of smoking." FTC, 1981 Report at 2-12 (JD 004744).

2459. Jeanne Bonhomme observed that although the recessed nature of the filter did not further reduce the tar delivery or make the cigarette any less harmful, she could "recall learning that some consumers believed that a recessed filter produced a cigarette that was better for you because it reduced tar and less tar was perceived to be less of a health risk." A November 23, 1988 Philip Morris USA memorandum cowritten by Bonhomme and Karen Eisen, with the subject heading "Parliament Super Lights In-Depths," confirmed that "[f]or many, the recessed filter implied a health benefit—'keeps tar away.'" Bonhomme WD, 34:18-35:1; 35:20-36:15; 2071388176-8178 at 8178 (U.S. 40452).

(2) Philip Morris's Research on the Low Tar Cigarette Category

2460. Internal Philip Morris documents show that Philip Morris conducted consumer marketing research not just on individual low tar cigarette brands, but on low tar cigarettes as a category. These documents establish that Philip Morris has long known and intended that its advertisements and marketing for low tar cigarettes, featuring claims of lowered tar and nicotine and "light" and "ultra light" brand descriptors, contributed to and reinforced consumers' mistaken belief that low tar cigarettes are better for their health, and encouraged consumers to smoke them for this reason.

2461. According to Nancy Lund, Senior Vice President of Marketing at Philip Morris, Philip Morris was aware in the 1970s and 1980s that some consumers believed that light/low tar cigarettes were safer than full-flavored cigarettes. She also noted that, during this time period, Philip Morris marketed such cigarettes to these consumers and profited from those sales. Brennan-Lund PD, Price, 9/20/02, 158:6-161:15.

2462. James Morgan, the former CEO of Philip Morris, acknowledged that the trend in the 1970s toward low tar cigarettes was due in large part to consumer perception that they were less hazardous to health than higher tar cigarettes, and specifically admitted that "the consumer was perceiving in the 1970s lower tar as tied to less hazardous." Although Morgan conceded that "we were aware of that," he admitted that, despite being armed with this knowledge, Philip Morris took no additional steps to counter that mistaken perception. Morgan PD, Price, 6/5/02, 42:16-42:25; 43:2-43:25; 44:2-44:25; 45:2-45:25; 63:10-63:25; 64:2-64:25; 65:2-65:21; 1004888470-8484 (US 85009); 502641641-1646 (U.S. 85008).

2463. A May 1976 study prepared for Philip Morris by The Roper Organization, titled "A Study of Smokers' Habits and Attitudes With Special Emphasis on Low Tar Cigarettes," stated:

[T]his study shows that the smoking public is convinced that to the extent any brands are better for health, it is the low tar brands that are Low tar brand smokers cite as the most liked characteristic of their brand . . . as compared with smokers of flavor filters,

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they say it is "better for your health" and cite its "more effective filter . . ." Brands Thought Better For Health— The low tar brands have cornered opinion that to the extent any brands are better for your health, they are Three in ten of all smokers said some brands were better for health than others, and

almost half of the low tar brand smokers said this.... Furthermore, it is the lower tar content of these brands that make people say they are better for your health.

2024921314-1612 at 1333, 1348, 1352-1353 (U.S. 20403).

2464. A January 1979 study prepared for Philip Morris stated:

These ultra low tar smokers indicated that they are aware of the low tar levels in their brands and that they switched to them specifically because of advertising calling this fact to their attention.... As lower and lower tar brands become available, it would appear smokers are subject to advertising pressure and brand availability, and the opportunity for switching obviously occurs.... Characteristics of ultra low tar smokers were: people who want to quit ... more interested in health When asked how they happened to switch to the brand they are now smoking many of the Carlton smokers cited advertising and tar and nicotine ratings.... When Carlton ads were shown in the groups, it was obvious that most respondents had seen them and were aware of the copy claims. It was these claims and other Carlton ads to which smokers referred prior to exposure and when discussing the fact that advertising had been one of the factors causing them to try the brand. This would seem to indicate that ultra low tar smokers are paying attention to and being attracted by the advertising. Respondents ... appeared to react favorably to the Triumph ads. They said that 3 mg. tar was within the ultra low tar range implying that it represented a safer cigarette.

2040066740-6766 at 6747, 6748, 6751-52, 6754, 6756, 6757 (U.S. 20435).

2465. A March 1979 report prepared for Philip Morris, titled "A Study of Smokers' Habits and Attitudes With Special Emphasis on Low Tar and Menthol Cigarettes," stated:

The appeal of low tars is simple and single—better for you, less harmful, easier on the lungs, throat, etc. The weakness or objection to low tars is also simple—tasteless, lacking in satisfaction, and the related factor of hard to draw on. At the same time there is clear evidence that if the appeal—safety—is strong enough, people can over time grow used to, and in some cases come to actually like, the main objection to low tars—low taste.

2049455309-5318 at 5315 (U.S. 22218).

2466. A June 1979 draft report prepared for Philip Morris by Goldstein/Krall Marketing Resources, Inc., titled "Smokers' Reactions to an Ultra Light Brand Extension for Marlboro," stated, under the heading "Awareness of Tar and Nicotine Levels":

One of the points on which respondents were probed when first shown the array of packs used as stimuli was their awareness of tar and nicotine levels for the brands. While most smokers in the groups could not give correct tar figures for each brand, they seemed to know a general range in which brands fell. . . . Respondents attributed their knowledge . . . to advertising. Evidently, the heavy weight of advertising concentrated against tar claims has penetrated these

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various groups of smokers to some extent.

2041097977-7999 at 7990 (U.S. 85006).

2467. A July 27, 1987 Philip Morris Asia letter from Joe Tchong to Cecil Yow stated:

The mild/lights segment is the fastest growing segment in the Hong Kong market There is definitely a growing health consciousness in the market due to regular Government anti-smoking campaign . Research shows that Lights = Mild = Less Harmful. Government's anti-smoking measures will intensify and . [t]his may further increase health concern and it is very likely that the mild/lights segment will continue its rapid growth.

2504046594-6601 at 6594 (U.S. 85012).

2468. A 1990 Philip Morris transcript of a conversation between Richard Carchman, then Principal Scientist, and John Tindall acknowledged that Philip Morris had used filters and claims of low tar as health reassurance mechanisms and that cigarette sales were tied to health concerns. Tindall stated:

[T]he things that happened in the market in the past I put under basically three groups. One has to do with people's health concerns which we addressed first through filters and then through low tar and ultra low tar The main thing that has happened in the market over which we have some control is that we have addressed peoples' health concerns through the number of steps I have mentioned the[re] are opportunities in the market now in the area of smoking and health. People's perceptions of cigarettes with regard to their effects on them [I]f we are going to do something significant enough to possibly even reverse the declining sales in the market, we're going to have to make advances in the area of people's health.

2023148544-8550 at 8545 (U.S. 85098).

2469. A 1990 Philip Morris document relating to "New Brand Development" in Pakistan revealed Philip Morris's knowledge that cigarette packaging can communicate "mildness" to consumers anxious about the "health/safety issue":

There was little doubt that the pack design with its reliance upon the central gold panel against a white background effectively projected the impression of a very mild cigarette The evidence as a whole seemed to indicate, in fact, that anxiety about the health safety issue had not yet reached the level where avowedly very mild cigarettes ... could expect an extensive franchise Over time, anxiety levels would rise, as they have done in other markets and when this happened mild/light brands ... would begin to achieve respectable sales.

2504008471-8519 at 8478, 8518 (U.S. 85013).

2470. Philip Morris USA's 1992-1996 Strategic Plan for Research and Development stated, under the heading "Perceived Health Concerns," that: "An analysis of the cigarette market over the last 50 years suggests that there have been only two major influences on smokers buying patterns; namely smokers seeking to address their perceived health concerns and smokers seeking price relief." The document further stated:

The development of products which address perceived health concerns ... is very much an R & D issue. Previous product changes driven by "perceived health concerns" were the growth of filtered products from 3 to 70% of the market between 1945 and 1953, and the growth of the low tar segment to nearly 50% of the market by 1985.... Filtered

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cigarettes now make up over 96% of the market.

2021529528-9638 at 9608 (U.S. 85084).

(3) Philip Morris's Public Statements About Low Tar Cigarettes

2471. Jeanne Bonhomme, Director of Consumer Insights for Philip Morris, stated that to her knowledge:

- "Philip Morris has always denied publicly that it markets low tar cigarettes as safe or safer than full-flavor brands;" and
- "Philip Morris has always denied publicly that it uses brand descriptors such as 'light' and 'ultra light' to communicate they are safe or safer than full-flavor brands."

Bonhomme WD, 11:18-20; 12:12-15.

2472. A November 14, 1994 fax from Censydiam USA to Philip Morris advised that with respect to the "Health & Fitness" trend: "Outside pressures have made consumers more concerned about health and fitness. They are interested in finding 'user friendly' ways of making their lives healthier without making dramatic changes in their current lifestyles." As examples of the consumer health trend, the document noted increased consumer interest in package labeling that included references to "low/no fat/salt" and "all natural," as well as an increase in the sale of products considered "good for you" such as fruits and vegetables. A 1994 Strategic Trend Analysis prepared for Philip Morris by Censydiam USA illustrating the "Health & Fitness" trend recognized how Defendants had capitalized on this trend, noting that: "Implications for Tobacco Companies: While the trend toward health and fitness is still alive, it has tapered off from its rage in the 1980's. The 1990's focus on moderation. The importance of low/ultra low products should continue in the near future." 2063704131-4132 (U.S. 39829); 2063704088-4091 at 4090-4091 (U.S. 39827); 2063704135-4136 (U.S. 27135).

2473. Faxes dated November 17, 1994 and December 7, 1994 from Thomas R. Keen of the consumer research company Censydiam USA to Marian Halpern, an employee in the Philip Morris consumer marketing research department, described an agreement with Philip Morris whereby Censydiam would produce "write-ups" to Philip Morris on consumer "trends," including, among others, "Health & Fitness," "Delusions of Youth & Beauty," "Dieting Dilemma," and "Quality of Life."

2474. In May 1996, representatives from Philip Morris, including Philip Morris General Counsel, Denise Keane, RJR, B & W, and Lorillard met with the FTC to discuss in part "how Philip Morris and other tobacco companies use FTC test results in their advertising," and "whether the FTC test method could be modified to more accurately reflect actual smoker intake." At that meeting, "the FTC referred to published research showing that smokers believe brand descriptors like 'low tar' and 'light' convey relative safety messages." The FTC requested that the industry representatives provide the FTC with "any information the companies had concerning the issue of consumer perception of low tar, so-called 'light' cigarettes." Despite the decades of consumer and marketing research conducted or commissioned by Philip Morris concerning consumers' interpretation of these terms (see Section V(E)(3)(a), *supra*), Keane testified that "Philip Morris did not provide any such information" to the FTC.

Keane WD, 46:18-48:23; Keane TT, 1/18/05, 10369:20-10370:25; 2048216131-6135 at 6134 (U.S. 38655).

2475. A September 10, 1999 Davis Polk & Wardwell memorandum to Mark Berlind

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of Philip Morris includes "a series of questions that might arise, as well as possible answers, relating to low delivery cigarettes and brand descriptors." In answer to the question "If the brand descriptors do not indicate what smokers actually inhale or serve as a point of comparison among competing brands, what purpose do they serve?" the memorandum proposed responding that Philip Morris's brand descriptors do communicate that Philip Morris's lower tar brands deliver less tar and nicotine than full-flavor brands: "For example, the 'Lights' in Marlboro Lights indicates that the smoke yields for Marlboro Lights is lower than that for Marlboro, and Marlboro Ultra Lights delivers less smoke 'tar' and nicotine than Marlboro Lights." 2072675414-5417 at 5415 (U.S. 27347).

2476. This document's proposed response to the question whether "Philip Morris ever intend[ed] to or propose[d] to take advantage of the "perception" of consumers that "lower-yielding brands [are] 'safe' or 'safer' than full-flavor brands" was that "Philip Morris has never intended [to] or proposed to take advantage of this perception. (although over time various individuals in the Company may have suggested that the Company do so)[.]" 2072675414-5417 at 5415-5416 (U.S. 27347) (bracketed material in original).

2477. Following publication of the NCI's Monograph 13 in November 2001, ABC News.com requested information from Philip Morris regarding low tar cigarettes and, as stated in a November 26, 2001 email from Philip Morris employee Christina Malito, "whether or not there are real health benefits to them." In an internal e-mail reply sent that same day, Ellen Merlo, then Senior Vice President of Corporate Affairs at Philip Morris and a decades-long Philip Morris employee, wrote that Philip Morris's response to the inquiry should be: "[W]e make no claims. Started producing them in response to consumer demand for lighter tasting cigarettes." 20858021752176A at 2175B (U.S. 85123*).

2478. Merlo later stated:

[A]s far as Philip Morris's position publicly, we would advise people not to in any way infer that light or lighter cigarettes are any safer than full flavor cigarettes ... my communication, both through our website and in any public statements that I make, would be that the general public should not in any way infer that light or lighter means that that cigarette is safer than a full-flavor cigarette.

Merlo PD, Price, 10/2/02, 96:24-101:24.

2479. According to Nancy Brennan-Lund, then Senior Vice President of Marketing at Philip Morris USA, Philip Morris's use of the word "lights" in its marketing of low tar cigarettes is intended to mean a lighter tasting cigarette. Brennan-Lund PD, Price, 9/20/02, 19:21-24.

2480. As recently as 2003 and 2004, the Board of Directors of Altria (formerly known as Philip Morris Companies), publicly made misleading statements to its shareholders and to the U.S. Securities and Exchange Commission ("SEC") in documents filed with the SEC. In a March 17, 2003 Proxy Statement, a group of Altria shareholders proposed to the Altria Board of Directors that "the Board find appropriate ways of informing our customers about the actual health risks of smoking 'light and ultra

light' cigarettes to disassociate them from any belief that such products are safer and deliver less tar and nicotine." The shareholder proposal cited Monograph 13 which found that "most smokers believe 'Lights' and 'Ultra Lights' are less harsh and deliver less tar and nicotine," and that, "on average, smokers believe that Lights afford a 25% reduction

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in risk, and Ultra Lights a 33% reduction in risk;" the Canadian Government's conclusion that the terms low tar, light and ultra light are deceptive to the consumer; and the World Health Organization's recommendation that the terms light and ultra light be banned as misleading. The Board of Directors of Altria recommended that shareholders vote against this proposal, stating: "for those adults who choose to smoke, PM USA and PMI believe descriptors such as 'low-tar,' 'mild,' and 'light' serve as useful points of comparison for cigarette brands regarding characteristics such as strength of taste and reported tar yield." (no bates) (U.S. 87741).

2481. In May 2004, Philip Morris placed the following statement on its website: "Philip Morris USA does not imply in its marketing, and smokers should not assume, that lower-yielding brands are safe or safer than full-flavor brands. There is no safe cigarette." TLT0770066-0088 at 0077 (U.S. 72408); accord TT, 2/24/05, 14340:19-20 (counsel for Defendants referring to Philip Morris website and stating "we don't tell people that these cigarettes are safer"); see also PM3000185282-5319 at 5289, 5291-92 (U.S. 88095).

2482. Philip Morris further states on its website:

Because smokers have varying preferences, Philip Morris USA offers products with differing yields of tar and nicotine, as measured by machine methods. We believe that it is appropriate to continue to differentiate our brands on this basis and that descriptors such as "lights," "ultra-lights," "medium" and "mild" help communicate these differences to adult smokers.

TLT0770066-0088 at 0077 (U.S. 72408); see also PM3000185282-5319 at 5289 (June 2003 Philip Morris website stating same and further stating "we believe that [low tar brand] descriptors serve as useful points of comparison for cigarette brands regarding characteristics such as strength of taste and reported tar yields ...") (U.S. 88095).

2483. Similarly, on August 22, 2002, although Geoffrey Bible, former CEO of Philip Morris Companies, claimed he had never been presented with any data as to how consumers actually perceive brand descriptors, he testified that he believes that they "simply convey taste preferences." Bible PD, United States v. Philip Morris, 8/22/02, 165:3-166:7.

b. R.J. Reynolds

(1) R.J. Reynolds's Low Tar Marketing Techniques

2484. Camel Lights advertisements in the 1980s offered the "solution" of low tar cigarettes that offered "[s]atisfaction" by providing acceptable "taste," which was lacking in low tar cigarettes:

1980: "Discover Camel Lights. Satisfaction. Low tar."

1980: "Discover satisfaction. Camel Lights. The Camel World of satisfaction comes to low tar smoking.... Camel Lights brings the solution to taste in low tar."

1981: "Camel Lights. Low tar. Camel taste."

1981: "Camel Lights.... Same low tar, same Camel taste."

519315781-5797 at 5788-5789, 5792-5793, 5795, 5796 (U.S. 79583).

2485. RJR's 1994 marketing research on Camel Special Lights advertising ("Concept # 17: The Special Lights Filter. Takes out impurities other filters can't touch") included the following statements from smokers that the advertisement conveyed to them:

"It sounds like it's taking the poison out of the cigarette."

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"Takes out the impurities—makes it sound like a healthier cigarette."

"The special filter would clean the cigarette and make it a healthier cigarette to smoke."

"It makes me feel I can enjoy smoking without harming myself because the filter takes out impurities. It sounds safer to smoke." "[I]t's safer for you."

"Sounds like it would save your lungs."

509619620-9625 at 9620, 9622, 9624, 9625 (U.S. 85015).

2486. RJR marketed Doral as a low tar cigarette brand in the 1970s. A January 1972 Doral advertisement in Newsweek magazine stated: "Doral, the low 'tar' and nicotine cigarette ... [t]he filter system you'd need a scientist to explain.... But Doral says it in two words: 'taste me.'" (U.S. 87452); Schindler WD, 68:12-13.

2487. A June 1975 RJR Doral advertisement in Sports Illustrated magazine analogized smoking low tar cigarettes to a "Doral Diet." The advertisement, depicting a man lighting a cigarette, stated:

How I lost 700 mg. of "tar" the first week ... without losing out on taste. I'm not too big in the willpower department. But I lost 700 milligrams of "tar" the first week on what I call "The Doral Diet." Now I can still enjoy smoking, and cut down on 'tar' and nicotine, too.... For a pack a day smoker like me, my Doral Diet really ads up.

(U.S. 4746); Schindler WD, 68:14-69:9; 03496228-6630 at 6329 (U.S. 20057).

2488. A June 24, 1975 advertising research report for the Doral "Diet Filter" advertising campaign prepared by Reynolds's Marketing Research Department and "conducted to aid in evaluating six 'Doral Filter' executions in recall impact and communication," recorded smokers' impressions and perceptions of Doral advertisements. 501457575-7706 at 7576

(U.S. 22150). Consumers had the following perceptions of the campaign:

The ad said something about a diet of tar and nicotine. My impression was that they had less tar and nicotine than other brands. The main idea was that they're better for you because of the cut-down in tar and nicotine. (Id. at 7581).

My impression was that they claim it's safer to smoke Doral than other cigarettes. (Id. at 7585).

The main idea was that it's safer to smoke. (Id. at 7586).

I got the impression that they want you to switch to Dorals and save your health. (Id. at 7587).

They brought out the idea that it might be a good cigarette to try if you're worried about the amount of "tar" and nicotine your lungs are absorbing. The main idea was to save your health, but if you still want to smoke, smoke Doral. (Id. at 7588).

It showed a man sitting in a chair and lighting up a Doral. It said that it had less "tar," but the taste didn't change. The impression it brought out was just the fact that it's a safer cigarette for your health, if you have to smoke. They were trying to get across that it has less "tar," and is still as good in taste as the other cigarettes. (Id. at 7591).

The main idea was that it's less dangerous to your health than any other cigarette. (Id. at 7593).

A man was smoking a cigarette. The ad said that Doral is lower in tar and nicotine than any other cigarette. The impression that came across was that they would be less harmful if you smoked them. There's a lower tar and nicotine count. The main idea of the ad was that smoking Doral is better for your health. (Id. at 7608).

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Their main idea was that they would still taste good, but they're low in tar and nicotine and would consequently be better for you. (Id. at 7611).

The main idea was you have less chance of danger to your health with Doral than another brand. (Id. at 7613).

My impression was it's much less of a health risk. (Id. at 7613).

Schindler WD, 69:14-71:21.

2489. Two months after this Doral Diet research report, RJR placed another Doral Diet advertisement in the August 4, 1975 edition of Sports Illustrated magazine that doubled the claimed loss of tar—to 1400 mg.—compared to the June 1975 advertisement, (U.S. 4746). The August 1975 advertisement featured the headline: "How I lost 1400 mg. of `tar' the first week . . . without losing out on taste." (no bates) (U.S. 4789); Schindler WD, 72:5-17.

2490. A 1975 study regarding the effectiveness of another Doral advertising campaign found that: "Attitude diagnostics indicated that smokers had no problem understanding the `Wise Up' campaign. Respondents felt that `Wise Up's' main point was a low tar and nicotine claim (84%) with some taste mentions (24%)." By way of example, some of the respondents noted:

The main idea they were trying to get across was it's less dangerous to the health and better tasting.

I guess the idea is that Doral is safer to smoke, as it has less tar and nicotine than others.

My impression was that Doral is less harmful.

The main idea they were trying to get across was to smarten up because the cigarettes have less tar.

The main point of the ad was you can have good taste and be a little less harmful, too.

501719738-9761 at 9738, 9748-49, 9752, 9755 (U.S. 22075); Schindler WD, 72:18-73:19.

2491. A July 27, 1976 letter to RJR employee Ed Blackmer discussed Doral's market positioning. The letter noted that the

smoker we are going after must be concerned about the health controversy. It is understood that we cannot necessarily target our media against "concerned" smokers, but that this must be accomplished via creative. Nevertheless, we believe it is an important factor in further "segmenting" our target audience.

50224143-4151 at 4147-4148 (U.S. 22103).

2492. In discussing a Doral 4 advertising research proposal in June 1977, the copy strategy was described as: "Convince the Prime Prospect that new Doral 4 is the solution to his concern about the smoking controversy because it offers the optimum combination of ultra-low tar and taste satisfaction." As a result, the advertising was to be addressed to smokers "seriously concerned about the alleged hazards of smoking," and who, "because of [their] concern, seek[] one of the lowest tar levels available (or an ultra-low level)." 501533008-3011 (U.S. 22107); Orłowsky WD, 69:1-23.

2493. Martin Orłowsky, former Executive Vice President of Marketing and Sales for RJR, admitted that RJR's advertisements for Vantage were targeted toward smokers who, due to their concerns about health risks, were seeking a low-tar cigarette. Orłowsky TT, 10/13/04, 2288:24-2289:19.

2494. Vantage advertisements from the 1970s used purported testimonials characterizing Vantage as delivering low tar to smokers and thereby reducing the health risk from smoking:

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1972: "Why I smoke Vantage. I read the papers. I watch TV. I hear the things some of them are saying about smoking And then, frankly, all that the critics say about tar' and nicotine has to make an impression. Fact is, they don't make me feel guilty about smoking Vantage." (no bates) (U.S. 3683); Biglan WD, 377:12-379:22.

1977: "Smoking. Here's what I'm doing about it ... like a lot of people I'm ... aware of what's being said [about the harm of cigarette smoking]. And like a lot of people I began searching for a cigarette that could give me the taste I like with less tar. . . . Vantage. It's everything the ads say it is What am I doing about smoking? I'm smoking Vantage." (no bates) (U.S. 5578); see also (no bates) (U.S. 324) (1978 Vantage advertisement in Rolling Stone magazine noting same).

1977: "Vantage is solving a lot of my problems about smoking". (no bates) (U.S. 239).

1977: "Vantage is changing a lot of my feelings about smoking. . . . I'm not living in some ivory tower. I hear the things being said against high-tar smoking as well as the next guy. And so I started looking for a low-tar smoke that had some honest-to-goodness cigarette taste. . . . As far as I'm concerned, when I switched to Vantage, I changed to a cigarette I could enjoy." (no bates) (U.S. 87456).

1977: "My wife got me to switch to Vantage. . . . My wife . . . would remind me of the stories being told about high-tar cigarettes. Well, I began looking into those new low-tar cigarettes. . . . [Vantage] tasted really good and they actually had less than half the tar of my old brand. . . . So now, I smoke Vantage. I get the taste I want and the low tar ..." (no bates) (U.S. 87457).

1978: "Why I choose to smoke . I'm not deaf to what's being said about tar. So I searched out a cigarette that would give me taste with low tar. . . . Vantage has all the taste I enjoy yet, surprisingly, much less tar than my old brand." ADV017 1589-1591 (U.S. 5756).

1978: "Vantage gives us more taste and less to argue about. My husband and I . . . [are] both aware of the things being said against high tar. So there we were facing each other every day, smoking our high-tar cigarettes and daring each other to switch to something lower Today, we both smoke Vantage. You could say we're getting less tar and we're getting along—with Vantage." ADV108 0001-0003 (U.S. 87504).

1978: "These days, why do I smoke? With all the talk about smoking and high tar, it didn't take much imagination for me to conclude that the cigarette of the future would taste good and probably be low in tar as well. . . . Then I discovered Vantage. It was my kind of cigarette. It gave me taste. Pleasure. And the low tar I was looking for." (no bates) (U.S. 295).

1979: "New Vantage Ultra Lights. Ultra taste. Never-before, silky smooth, truly satisfying taste—in an ultra low tar cigarette! (And we do mean ultra low. At only 6 mg of tar, it's lower than 90% of all the cigarettes that people buy.) How is it possible? Through a unique blend of very select, very flavorful tobaccos. That's the Ultra Cigarette—new Vantage Ultra Lights from Vantage." (no bates)

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(U.S. 6255); (no bates) (U.S. 6286); Biglan WD, 377:12-379:22.

1988: "Vantage Ultra Lights. How can anything so ultra light taste so ultra good? Find out for yourself. Try a pack today." (no bates) (U.S. 1613); Biglan WD, 377:12-379:22.

See also Orlowsky WD, 73:1-76:22 (discussing U.S. 5578; 324; 239; 87456; 87457; and 295); 76:23-77:11 (discussing U.S. 6255); 77:12-78:21 (discussing U.S.) 5756 and 87504); Orlowsky TT, 10/13/04 2284:14-2285:20 (discussing U.S. 87504).

2495. The following advertisements for Vantage from the 1970s are clearly encouraging health conscious smokers to switch to Vantage:

1974: "Maybe the people who criticize smoking should stare the facts in the face. Then they might recommend that if you've decided to smoke, but are concerned about `tar' and nicotine, you might smoke Vantage. Vantage offers smokers the rich, tobacco flavor they've come to appreciate. With a substantial cut in `tar' and nicotine. So if you're one of those smokers who is now deciding between high `tar' and nicotine cigarettes that taste good, and low `tar' and nicotine cigarettes that taste like nothing, you might appreciate Vantage Vantage is both high in flavor and low in `tar' and nicotine." 03496228-6630 at 6313 (U.S. 20057).

1976: "Are you still smoking? In the years since the criticism against smoking first appeared, many people have given up cigarettes. But many more people haven't. . . . [W]e'd like to talk to [t]hat

even larger group of people who are still smoking today. If you're a smoker, you've probably heard the charges leveled against `tar' and nicotine. You may have become concerned. And chances are you even tried to do something about it. Like trying . . . low `tar' and nicotine cigarettes. . . . Vantage cuts down substantially on the `tar' and nicotine you may have become concerned about. . . . So, if you still smoke, but would like to cut down on tar' and nicotine, Vantage is one cigarette you should seriously consider."

500713420-3420 (U.S. 48350).

2496. An internal February 11, 1975 B & W memorandum by "J.V.B." commenting on RJR's Vantage advertisements stated that RJR's advertisement ("Why do you smoke? With what you've been hearing about smoking these days, you probably wonder sometimes why you smoke at all") was "address[ing] the health issue for competitive purposes." 690007757-7760 at 7759 (U.S. 21039).

2497. An April 19, 1978 memorandum states that "Vantage has traditionally limited its target market to `concerned' full flavor smokers." 500210073-0075 (U.S. 22108).

2498. In a 1981 memorandum to M.M. Sheridan, titled "Reactions to the VANTAGE/Merit Image Study," K.A. Schmitt reported that, based upon the study, "smokers in our target category have two primary product desires: a lower tar product which addresses their safety/health concerns, and a product which provides taste satisfaction." The memorandum further reported that "VANTAGE is seen as not dealing as directly or effectively with the health/safety concerns of the consumer as Merit. Our current advertising approach focuses much more heavily upon the taste/pleasure aspects of our brand than on the safety/health aspects." As a result, the memorandum recommended that Vantage marketing be modified to better "target" smokers with health concerns: "Perhaps a more balanced approach is needed, both to tone down the percep

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of harshness and to renew the belief that VANTAGE does indeed address the target consumer's health/safety concerns." 523474848-4851 at 4848 (U.S. 22156); Orłowsky WD, 71:15-72:16.

2499. An August 1981 consumer research study, titled "Vantage Personalities," prepared for RJR by Social Research, Inc., noted that people in the Vantage target market "have very definite concerns about the alleged health hazards connected with smoking. It is these qualms that have prompted many of them to seek out lower tar brands." That report likewise noted that the target market

abandoned [] harsher brands in search of milder brands with lowered tar and nicotine. This movement was almost always prompted by health concerns. In some cases, people were experiencing actual problems such as coughing, throat irritation, and shortness of breath. Others may not have experienced actual symptoms, but were worried about the publicized alleged health hazards associated with stronger cigarettes.

503148009-8077 at 8006, 8070 (U.S. 22159).

2500. An April 1982 research study, titled "Vantage and Merit Smokers," prepared for RJR by Social Research, Inc., stated:

Both Vantage and Merit smokers have similar early smoking histories . . . switching to lighter cigarettes to relieve physical symptoms and as an acknowledgment of increased concerns about alleged

health hazards.... [Quoting a Vantage smoker]: "They are lighter, lower in tar and nicotine.... They are satisfying like a full-tar cigarette, but they are better for my health.... The filter seems strong and effective as a trap for `harmful' ingredients." Vantage smokers believe that the filter itself is strong enough to catch these impurities These ideas make them think the end product is a milder and more "healthful" smoke.... [Quoting a Vantage smoker]: "I like the filter because there's a lot of it, like it's filtering out a lot of the harmful things, like the tar."

511469097-9250 at 9105, 9116 (U.S. 20842) (emphasis in original); Orlowsky WD, 72:17-23; 81:4-8.

2501. A 1979 study prepared for RJR, titled "An Exploratory Study of Smokers' Comprehension of and Reaction to Several Proposed Winston Lights Campaigns," noted that with respect to one of the Winston Lights advertisements, consumers typically reported that they understood the advertisement to mean: "A low tar cigarette that tastes good, is satisfying and safer." 501071439-1530 at 1453 (U.S. 22110); Orlowsky WD, 83:7-12.

2502. Advertisements for RJR's Now cigarette in the late 1970s and 1980s described Now as "the lowest," "lowest in tar," and "lowest tar champion," and included the following:

Now. It's a Satisfying Decision. LOWEST TAR CHAMPION. NOW MENTHOL IS LOWEST By U.S. Gov't. testing method.

NOW is LOWEST Of All Softpack 100's. Pick the Lowest. NOW IS LOWEST By U.S. Gov't Testing Method.

WHEN IT COMES TO THE LOWEST IN TAR, ONLY ONE MEASURES UP. NOW IS LOWEST Of All Soft Pack 100s. By U.S. Gov't. testing method.

(no bates) (U.S. 5852) (1978); 970469347-9474 at 9430, 9429, 9427, 9431 (U.S. 85104).

2503. A 1983 Now Brand Image report, prepared for RJR, concluded that health concerns heavily influenced a smoker's decision to choose one brand over another and that smokers perceived lower

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tar cigarettes as healthier than their fullflavor counterparts. It stated that "[a] major motivation in brand switching has been concern over health. . . . The typical solution to this dilemma is the two pronged approach of trying to cut down and/or moving to a lower tar brand." The report went on to indicate that, when respondents were asked what the words "low" and "lowest" in the advertisements meant to them, "[t]hey interpret this to mean that the two brands are `safer' and pose less of a health hazard. Consequently, they reason, this would make the brands more appealing to younger people who are very health conscious or to older, long-time smokers who are concerned about the long-range effects of tobacco." 506671319-1418 at 1379 (U.S. 22160).

(2) R.J. Reynolds's Research on the Low Tar Cigarette Category

2504. Internal RJR documents show that RJR conducted research not just on individual low tar cigarette brands, but on low tar cigarettes as a category. These documents demonstrate that RJR has long known and intended that its advertisements and marketing for low tar cigarettes, featuring claims of lowered tar and nicotine and "light" and "ultra light" brand descriptors, contributed to and reinforced

consumers' belief that low tar cigarettes are better for their health, and caused consumers to smoke them for this reason.

2505. A 1974 survey showed that "a substantial majority of smokers said they agreed with the statement, 'low tar and nicotine cigarettes are a major step in making smoking less harmful to their health.'" 501238259-8269 at 8265, 8269, 8271 (U.S. 22072); 501238270-8357 (U.S. 48736).

2506. As part of a 1975 marketing plan to introduce a new low tar Salem product, RJR recognized that "Mow numbers are the primary benefit/feature which can solve the concerned smoker's anxiety about health." 50231320-3308 at 3253 (U.S. 22151).

2507. A November 17, 1975 report prepared for RJR by Rosenfeld, Sirowitz & Lawson, Inc., titled "An Evaluation of the 120MM Market and Its Potential for RJR," stated:

Currently RJR divides the total cigarette market into three basic categories: Full Flavor; Medium Flavor; High Filtration. However, the recent rapid growth of the High Filtration segment, may be a signal that the consumer is beginning to be more health conscious than ever before, and will be even more so as time goes on. If this is the case, we believe that consumers will ultimately divide the market into three categories which in their minds would be categorized as: "Least Safe Brands" "Safer Brands" "Safest Brands."

The RJR report defined the "Safer" and "Safest" brand categories as follows:

Safer Brands: These are brands which are perceived to combine an acceptable level of taste with mildness. Smokers of these cigarettes, while not overtly concerned with health, do switch to them after feeling some physical discomfort from their previous brand. Although they are not aware of T & N numbers, they know they are "moving down" to a milder cigarette.

Safest Brands: Cigarettes in this category are perceived to have a mild taste. Smokers of these brands are very concerned about health and quite aware of T & N numbers. Their concern—more than any physical discomfort—causes them to switch to brands with low T & N numbers.

2508. The report further concluded: "We believe that the most dramatic evidence of the growing interest in Safer

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Cigarettes may be seen in the growth of the various Lights/Milds line extension products." 500671364-4454 at 1402, 1403, 1405 (U.S. 22158) (emphasis in original). The report also stated: "As previous research has indicated, Smokers of Lights/Milds products (designated in this report as Safer Brands) are not aware of T & N numbers. Hence, the fact that a 120MM Lights entry will have high T & N numbers (on a total cigarette basis) should not impede its progress." 500671364-1454 at 1408, 1436-37 (U.S. 22158); Schindler WD, 75:5-13.

2509. A November 16, 1976 RJR document, titled "New Brand Development," recommended introducing a "New, Single— Minded Advertising Campaign" that would "convey our lowest 'tar' benefit." In terms of future plans, the document stated "[f]or example, in the new and special wants area, there is style and value which we met with MORE, extreme health concerns which we are meeting with NOW [brand cigarettes], and with the evolution of the market toward low 'tar', many more

opportunities will be present in this area" A section of the document titled "Super Low `Tar' Products" stated: "We will also be working on super low tar products which address the wants of very concerned smokers. A growing number of smokers seek products with tangible/visible features to assuage their concern about smoking." 501282466-2513 at 2480-2481, 2488, 2496, 2502 (U.S. 48813).

2510. A June 21, 1982 Product Research Report on Non—Menthol Ultra Low Tar Consumer Probes, written by RJR's Marketing Development Department, stated: "Most respondents [ultra low tar smokers] preferred a white filter to a cork filter because they considered white to be more indicative of ULT cigarettes. The white filter generated strong associations with gentleness, purity, cleanliness, modernization, and innovativeness." 503394459-4485 at 4464 (U.S. 85036).

2511. The 1982 report also stated: "Women are more optimistic about new brands that could offer lower tar. They are more willing to compromise on taste if they feel a cigarette has more personal benefits, although `It would be great if it has good taste, too.'" The report further stated that ultra low tar smokers "want as little tar as possible, but they want taste to be at least on par with current ULT brands. They feel they have made taste trade-offs by smoking a ULT." The report continued: "It is unlikely ULT smokers would switch brands if the tar level of the new cigarette is equivalent to their current brand. Lower tar is a strong motivating factor." The report also recognized that smokers perceive low tar cigarettes as having less desirable taste, stating: "The main obstacle appears to be to convince smokers the new cigarette delivers a more flavorful, richer taste, and lowering the tar does not reduce taste and smoking satisfaction." The report also noted:

Women seem to be more accustomed to moderation in their lifestyles. For example, they are inclined to trade-off some taste for the weight control and health benefits of low calorie and low fat foods. They want some taste assurance, but are open to compromise. They are willing to tolerate an adjustment period as they become acclimated to a new product they perceive to be better for them.

The document further stated: "ULT smokers perceive low tar claims to be credible. They try to balance their desire to smoke and personal concerns." 514343517-3566 at 3522, 3524-26, 3530, 3540 (U.S. 51848).

2512. According to Gary Burger, RJR Senior President of Research & Development, RJR was aware that consumers

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smoke low tar cigarettes for the perceived health benefit. Burger observed that "[c]ertainly, smokers perceive lower tar cigarettes in some ways to be better for them and therefore they want them." He noted that consumers "have that impression that there are higher levels of bad stuff in high tar cigarettes and lower levels of bad stuff in low tar cigarettes." Burger PD, Arch v. American Tobacco Co., 8/21/97, 226:9-243:18.

(3) R.J. Reynolds's Public Statements About Low Tar Cigarettes

2513. In May 2004, RJR's website stated: "Reynolds Tobacco is not interested in trying to persuade any nonsmokers to begin smoking or in persuading any smokers not to quit." Andrew Schindler, Executive Chairman of Reynolds American Inc., testified that "Reynolds Tobacco is not interested in trying to talk any smokers out of quitting." TLT0770095-0128 (U.S. 72410); Schindler WD, 76:17-77:5.

2514. RJR's website further stated: Our company, like other cigarette manufacturers, uses brand descriptors such as "full flavor," "lights" and "ultra lights" to differentiate cigarette brand-styles in terms of such characteristics as strength of taste, and reported "tar" and nicotine yield. These terms do not, and are not meant to, imply that any cigarette brand-style or any category of cigarettes is safer than any other.

TLT0770095-0128 at 0111 (U.S. 72410); Schindler WD, 64:19-65:3.

2515. A March 21, 2003 RJR statement to stockholders presented a proposal "to find appropriate ways of informing our customers about the actual health risks of smoking 'light and ultra light' cigarettes to disassociate them from any belief that such products are safer and deliver less tar and nicotine." This proposal cited the conclusions of NCI Monograph 13 that low tar cigarettes present no significant reduction in harmfulness relative to full-flavor cigarettes, and that "many smokers choose these products as an alternative to cessation" out of a mistaken belief that they are less harmful. The proposal also referenced several pending lawsuits against one or more of the Defendants alleging fraudulent marketing of low tar cigarettes as less harmful. The Board of Directors of RJR recommended a vote against this proposal. One of the reasons given by RJR for rejecting this proposal was that, "if implemented, this proposal could significantly interfere with RJR's defense of pending litigation." TLT0960025-0029 at 0027-0028 (U.S. 87993); Schindler WD, 66:4-67:16.

c. Brown & Williamson

(1) Brown & Williamson's Marketing of Low Tar Cigarettes

2516. A B & W document, titled "Kool Family Utopian Objectives 1979-1985," stated that "Kool must move into the health reassurance segment so that 45% of KOOL business will be in the perceived product safety arena by 1982 which will approximate the 45% of total smokers who will be smoking hi-fi products by 1982." Under the heading "Strategies," the document stated: "Provide product safety reassurance while enhance [sic] the satisfaction and refreshment perception of the appropriate KOOL styles through the successful national launch in 1979 of either: 1. Low 'tar' parent [or] 2. Repositioned KOOL Milds." 680559149-9162 at 9149-9150 (U.S. 54048).

2517. An internal March 25, 1983 B & W memorandum from A.J. Mellman, a B & W marketing employee, to R.A. Blott, B & W Senior Vice President of Domestic Marketing, regarding current cigarette project ideas for the Kool brand family, including low tar brands, stated: "KOOL maintained a three share level for over 30 years

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(through mid-60's) while positioning itself as a specialty cigarette to be smoked only for remedial or medicinal purposes." The fourth project idea was: "Improve health aspect: Anything that can be done to decrease the risks associated with cigarettes is a positive to most consumers." 514110006-0009 at 0007-0008 (U.S. 21745).

2518. An April 28, 1998 document prepared for B & W, titled "Kool Natural Lights Round I & II Focus Groups: Presentation of Findings Prepared for Brown & Williamson," under the heading "Highlights: Natural Lights Idea," stated: "Respondents assumed that a natural light cigarette would be less harmful

than a regular cigarette, they did not assume it would be `healthy.'" 210430297-0396 at 0322 (U.S. 67711); Smith WD, 83:18-84:20, 85:6-8.

2519. B & W's objectives for the 1957-1961 Viceroy advertisements were to "[a]ttract smokers ... promising ... implied health benefits because of filter" and "with substantial health benefit implications, because of blend and filter." Ivey WD, 51:15-52:13; Smith WD, 71:18-72:1; 670001750-1766 at 1754-1755 (U.S. 20962).

2520. A 1975 B & W document, titled "Viceroy Marketing Strategy," identified the "Problem Advertising Must Solve": "[A]dvertising must . . . cope with consumer attitudes about smoking, providing either a rationale or a means of repressing the health concern." 680113760-3763 at 3762 (U.S. 20987); accord 680116947-6968 at 6959, 6961 (U.S. 21877) (1975 document, titled "Viceroy Agency Orientation Outline," stating "Test Market Campaigns: Strategy-Given consumers awareness of the smoking and health issue, full flavor smokers must deal with their illogical behavior. Therefore, we attempted to communicate Viceroy's flavor/satisfaction benefits by providing consumers a rationalization for smoking or a repression of the health concern"); Smith WD, 73:2-17.

2521. The memorandum noted that, in 1953-1954, Viceroy's advertising campaign slogan was "VICEROY's double barreled health protection" and "Better Your Health," with the "objective and creative strategy" being to "[a]ttract smokers of all other cigarette brands by promising superior health protection because of more effective filtration from both a new filter and a longer length." The memorandum concluded that "[t]hese two product changes firmly positioned VICEROY as a high-filtration, healthier cigarette and attracted smokers in droves." The same theme continued in 1955-56, when one of the "Objectives and Creative Strategies" listed was to "Attract smokers of non-filter brands and the new filter brands by promising good taste equivalent to non-filter brands and superior health protection because of blend and filter." 670001750-1766 at 1752-1754 (U.S. 20962); see also (U.S. 87468); (U.S. 87469); (U.S. 87470) (1953 magazine advertisements featuring claim of Viceroy's "double barreled health protection").

2522. Carlton is a low tar brand that was originally manufactured by American Tobacco until that brand was acquired by B & W in 1994, along with American Tobacco's Lucky Strikes, Pall Mall, & Tareyton brands. Gesell PD, *State of Minnesota v. Philip Morris Inc.*, 9/18/97, 6:10-17; 117:3-15; 25:23-26:3; 93:2-13.

2523. According to Sharon Smith, former Director of Marketing Services and Operations at B & W, "Carlton advertising focused on tar delivery." She explained:

For Carlton, it's not an imagery campaign. It's more communication of tar levels. I'm familiar with consumers of competitive brands to Carlton saying in focus groups that to convince them to switch from their brand to Carlton, an

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understanding of what the tar levels are is more important to them.

Smith further explained that, for those smokers, her research has found that their understanding of the tar and nicotine numbers is based "certainly on our advertising." Smith WD, 69:10-14; 75:3-23.

2524. A B & W document circa 1996-1997, titled "Carlton Creative Plans," disclosed that the first "Primary" trait of Carlton's target audience was "Health Conscious." With respect to print advertisements, the report stated: "Magazine [advertisements for Carlton] Will be Driven by Editorial That is: 'Health Conscious.'" Carlton's "brand strategy" was "to continue to defend the franchise while communicating its 'lowest' positioning to maintain switching inflows from those smokers trading down in tar levels." The document went on to state that "CARTON packaging issues will be explored to determine how best to communicate ultra light product cues ... hype its increased communication of ultra low tar." 176020783-0800 at 0785, 0792, 0798 (U.S. 23351); accord 176020856-0926 at 0868-0869 (U.S. 23357).

2525. In 1999, B & W began a promotional campaign emphasizing that Carlton cigarettes were Ultra Light, including package statements that Carlton delivered only "1 mg." of tar. B & W's advertisements featured the slogan "Isn't it time you started thinking about number one?" According to Susan Ivey, "many factors drove consumers' preference for Carlton, and for some smokers, one of those factors was a belief that ultra low tar could reduce one's risk." Ivey WD, 52:14-53:15; ADV027 0780-0782 (U.S. 9846); ADV045 0468-0470 (U.S. 11362) (1999 advertisement); ADV027 0924-0926 (U.S. 9892); ADV032 0011-0013 (U.S. 10678).

2526. In March 1999, Nicholas Brookes, B & W Chairman and CEO from 1995 to 2000, became aware of a discrepancy in the tar delivery of Carlton cigarettes. The cigarette, when smoked by human smokers, delivered three milligrams instead of the advertised one milligram of tar. Because B & W had just introduced a new advertising campaign "touting Carlton as the '1' for you," Brookes attempted to delay the publication of a study that would have alerted the public to the new findings. Brookes did not direct B & W's marketing department to discontinue the "Carlton is the '1' for you" campaign, even though he acknowledged that it might cause confusion for consumers. 190245079-5080 (U.S. 85018); Brookes PD, United States v. Philip Morris, 3/31/03, 146:18-148:12; 149:3-149:20; 150:14-150:18.

2527. A July 27, 2000 document prepared for B & W by Kay Harwood Marketing Analysts, Inc., titled "Topline Report of Findings for Carlton Advertising Research," indicated that smokers continue to view Carlton cigarettes as healthier, stating: "Focus groups were allowed to submit two words in addition to those suggested by the group hosts. Among the words independently chosen to describe Carlton cigarettes were 'feeling healthier' and 'healthier.'" Among the Report's "Key Findings" are the statements from the focus groups in response to several Carlton campaigns. The statements include:

Healthier—trying to sell a healthy cigarette—Very few people have realized that Ultra is better ... Purity/better for you.... Fewer people have health problems smoking this brand. . . . This cigarette is best for you ... better for you... Clean & improved—healthier brand; less nicotine. . . . Healthier living.... Carlton is healthier for you. . . . Gives next to nothing harmful—means healthier—Carlton is healthier for you . . . safe cigarette.... They

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are much better for you—A healthier cigarette Healthier.... This is the best for you—lowest in bad stuff.... Better for you, lighter smoke.... Carlton will make you happier and healthier.... Health-minded, concerned people (get healthier). . . . The safe cigarette—Cut down your risk—Light and less harmful.... This will save you—this is the solution you have been waiting for.

250255336-5347 at 5340, 5343-5347 (U.S. 22031). These statements were repeated in an August 8, 2000 document prepared for B & W by Kay Harwood, Marketing Analysts, Inc. titled "Carlton Advertising Research: Report of Key Findings." 250255060-5075 at 5064, 5066-5068, 5071-5075 (U.S. 22170).

2528. A document, titled "Carlton Advertising Research: Four Focus Groups," bearing MAI (Marketing Analysts, Inc.) and B & W insignia on the cover, discussed July 2000 focus groups stating that smokers of both Carlton and competitive Carlton Ultra light associated Carlton cigarettes with being "[Wetter for you/[h]ealthier." The Report concluded that the Carlton "It's the Least You Can Do" campaign (labeled the "U" campaign) created the impression that "Carlton is better for you." The Report's "Key Recommendations" include: "If the primary objective of the advertising campaign is to position Carlton as a lower/the lowest tar and nicotine cigarette, the current research suggests the 'U' campaign (It's the least you can do) effectively conveys this positioning." 250221262-1294 at 1275, 1277, 1287 (U.S. 22030); Ivey WD, 59:206060:12.

(2) Brown & Williamson's Research on the Low Tar Cigarette Category

2529. Susan Ivey acknowledged that she is aware that "some smokers choose lights because they perceive a health benefit," and that "Brown & Williamson's consumer research . . . indicates that certain smokers switch to low tar cigarettes because they believe that these cigarettes are 'less harmful' than regular cigarettes." As demonstrated below, these consumer research documents establish that B & W has long known and intended that its advertisements and marketing for low tar cigarettes, featuring claims of lowered tar and nicotine and "light" and "ultra light" brand descriptors, contributed to and reinforced consumers' mistaken belief that low tar cigarettes are better for their health, and caused consumers to smoke them for this reason.

2530. For instance, a 1967 B & W advertising and marketing strategy for highfiltration/low tar products describes B & W's marketing strategies:

[Vanguard brand strategy:] "To capitalize upon a prevalent smoker desire to lessen the health risk involved in his smoking via a switch to a low tar cigarette.... Advertising Objective—Communicate a dual smoker benefit: low tar and satisfying taste."

Modified LIFE "Marketing Strategy— To fully capitalize on health vs. cigarette smoking publicity and publishing of tar/nicotine data by marketing LIFE as the lowest tar cigarette in the filter 85 segment."

Filter 70's "Marketing Strategy—To capitalize on smoker concern of 'smoking too much' by offering a means for reducing smoking without ... cutting down on number of cigarettes smoked.... Advertising—Filter 70's would offer smokers the opportunity to smoke up to one-third less (shorter tobacco section), but they can light up as often."

Ivey WD, 57:22-58:10, 63:1-8; 670186789-6824 at 6790, 6792, 6798, 6802, 6804 (U.S. 21431).

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2531. An August 1967 B & W document, titled "A Psychological Map of the Cigarette World," stated that

PEOPLE WHO SMOKE FILTER CIGARETTES ... ARE MORE CONSCIOUSLY IN CONFLICT ABOUT SMOKING.... THEY CAN'T COMPLETELY ENJOY SMOKING BECAUSE THEY KNOW IT IS NOT HEALTHY. . . .

THEY MAY BE RECEPTIVE TO ADVERTISING WHICH HELPS THEM ESCAPE FROM THEIR INNER CONFLICTS ABOUT SMOKING.

680282619-2668 at 2642 (U.S. 85305).

2532. A 1969 marketing document from B & W's files prepared by a consultant for Imperial Tobacco, the sister company of B & W, stated that the smoker "seeks a new covenant between himself and the tobacco industry" and has "trust" that the industry "is going to provide him with a product that he can enjoy without fear of physical or psychological reprisal." 680082943-3125 at 2959-2960 (U.S. 20983).

2533. An October 21, 1971 Philip Morris document acknowledged that it "was abundantly clear" that manufacturers in the United States, and B & W in particular, "are concentrating on the low TPM [total particulate matter] and Nicotine segment in order to create brands with distinctive product features which aim ... to reassure the consumer that these brands are relatively more `healthy'" than regular full-delivery cigarettes. "Hence B & W is devoting its efforts entirely to the Hi-Fi ['high filtration'] segment, and its two major projects . . . demonstrate this strategy." 100028935-8937 at 8935 (U.S. 20089).

2534. A September 1974 B & W marketing research study, titled "The `New' Smoker," examined the "Behavioral Factors" of new smokers and concluded that new smokers are "misinformed on cigarette strengths." The study concluded that new smokers believed that low tar cigarettes were "better for you." 779217794-7833 at 7822-7823 (U.S. 21055).

2535. A November 29, 1976 B & W memorandum from F.E. Latimer to B.L. Broecker and M.J. McCue, all B & W marketing employees, described the role cigarette advertising plays in allaying smokers' fears of the health consequences of smoking:

[B]ecause such large numbers of the institutions and leaders he believes in are against smoking, the average smoker often seeks self-justification for smoking. Good cigarette advertising in the past has given the average smoker a means of justification on the two dimensions typically used in anti-smoking arguments. ... All good cigarette advertising has either directly addressed the anti-smoking arguments prevalent at the time or has created a strong, attractive image into which the besieged smoker could withdraw.

680086039-6044 at 6039-6040 (U.S. 20984).

2536. A January 1977 report prepared for B & W by Post Keyes Gardner, Inc., discussed successful cigarette marketing in similar terms:

The fundamental long term trends in the business are for smokers to move gradually to products that represent benefits of "health and modernity. . . . Successful brands have offered "real" or "perceived to be real" products benefits that are founded on smokers' needs for "health" and modernity. . . . Successful advertising in the cigarette business is achieved by establishing a brand image based on a product benefit that fulfills consumers' needs for taste, "health" and modernity.... Historically, brands that have achieved the most success are those that offer taste within the confines of "health....." [T]he real "action":

is in products that deliver, or are perceived to deliver, taste while representing the most reasonably "safe" product available . . . products have evolved along the long term continuum toward "health" and modernity. Those that have capitalized on these trends with a point-of-difference are the ones that have been the most successful . . . Viceroy was the first brand to directly capitalize on [the perceived health benefits of filters] by featuring its filter benefit, and sales were dramatic for the brand.... [In 1965,] Carlton was introduced—the first real response to the "health" issue as we see it today. . . . Three hifi [high filtration] brands, True, Doral and Vantage (with new, more modern filters) were successfully introduced [in the late 1960's], capitalizing on the "health" atmosphere that the anti-smoking forces were creating . . . FORECAST FOR THE FUTURE. . . . In sum, the dynamics of "health" and modernity trends will be dominant. The smoker appears to be ready to make another major shift, losing gratification and obtaining a "safer" product, to a new generation of products with single digit tar numbers.... The smoker will be inundated with "health" oriented advertising.

776158413-8426 at 8416, 8419, 8422-8423, 8425 (U.S. 22339) (emphasis in original).

2537. B & W's 1977 New Products Annual Marketing Plan reviewed marketing strategies for new "health oriented" low tar brands to be directed at "the extremely health conscious (worried) segment of the market." According to the plan, the "Overall Objective" was "[t]o develop and successfully launch a product which distinctively positions itself as being the 'safest' alternative in smoking." In a review of Savannah brand cigarettes, the plan noted that the "Hi-Fi [high filtration] segment stems directly from the increasing concern over the smoking and health issue." The Savannah brand was to be "positioned against those consumers with serious health concerns who continue to smoke full flavor brands." 670156293-6424 at 6303, 6323-6324, 6342 (U.S. 53746*).

2538. This same 1977 Marketing Plan recommended that the:

[a]dvertising copy should assume the tone of objectivity and genuine importance. The authenticity and frankness of the copy must be arresting enough to gain the attention of those consumers concerned about their health. Taste reassurance for the brand should be subordinated in efforts to play up health reassurance claims.

In a section titled "Market Review," the plan went on to say that "[t]he appeal of the brands competing in this segment [enriched flavor ultra low tar] is solely on the basis of implied health claims." 670156293-6296 (U.S. 53745); 670156297-6242 at 6324, 6327 (U.S. 53746*).

2539. A July 25, 1977 B & W Internal Marketing Study, titled "Low 'Tar' Satisfaction, Step 1: Identification of Perceived and Underperceived Consumer Needs," recited the percentage of starters and quitters from 1969-1976, and stated:

[A]s the dynamic proportion of quitters continues to be larger than the proportion of starters, actual smoking incidence has declined about ten percentage points over the last ten years . . . Increases in per capita consumption are assumed to correlate with lowered "tar" delivery as well as other factors HEALTH REASSURANCE: Almost all smokers agree that the primary reason for the increasing acceptance of low 'tar' brands is based on the health reassurance they seem to offer. . . . It must be assumed that Full Taste smokers come down to "low tar" expecting less

taste ... [t]hey are willing to compromise taste expectations for health reassurance.

775036039-6067 at 6043-6044, 6047, 6052 (U.S. 21053).

2540. A 1977 document bearing the B & W seal discusses B & W's Belair low tar cigarette:

Does Belair have growth opportunities?—Increasing "health" orientation of cigarette marketing and the correspondingly greater potential for `lighter' cigarettes.

To realize this growth opportunity, Belair must: . . .—compete directly in the low tar' segment where greatest potential is ...

Current Positioning Objective: To reestablish and maintain the relevancy of Belair's heritage as a cigarette which provides a light, yet, satisfying menthol alternative and a `health' reassurance relative to full-taste brands

July 1977 `tar' reduction ... will allow for specific low "tar" support of the important "health" reassurance element of this brand positioning. . . .

Overall Belair Operating Strategy:— Through advertising, make the Belair historical image/positioning as a "light" cigarette more relevant to the current `tar' conscious environment....

Belair Copy Strategy: To position Belair as a cigarette which offers ... lower "tar" reassurance relative to full-taste brands. . . .

Belair Prime Prospect: The current Belair smoker with whom the reassurance of the lower "tar" positioning addresses possible concerns which might otherwise prompt the user to switch to a competitive low tar' cigarette.

779027336-7360 at 7339-40, 7350-51, 7354-55 (U.S. 22163).

2541. A September 26, 1977 letter from P.J. Tighe, B & W Senior Brand Manager of New Products, to colleague Don Johnson discussed additions to Low Tar Brand Plans. The letter stated that the "Low `Tar' Menthol Plan" needed to provide "Health Reassurance." 660093935-3935 (US 53576).

2542. A document, titled "Fact Operational Plan for Fourth Quarter 1977 and 1978," noted that "[t]o the extent that health reassurance equates with smoking fewer of less `harmful' cigarettes, the reassurance must be handled carefully, since consumers clearly consume low `tar' cigarettes in greater quantities." The document also concluded that "[t]he greatest need in the marketplace is for a cigarette that promises and delivers: 1) Taste/Flavor, 2) Product Quality, and 3) Health Reassurance." 676038502-8796 at 8573, 8578, 8590 (U.S. 53923).

2543. A 1978 B & W document, titled "Purite Filter," acknowledged that the "common area of leverage" of successful brands was implied health benefits due to low tar:

The move to hi-fi cigarettes is continuing, motivated by consumers who demonstrate personal concerns towards smoking in either the health, social areas, or both. To capitalize upon these perceived consumer needs, three successful positionings have emerged in hifi: health reassurance, taste reassurance, and social acceptability. All three positionings use low "tar" as a common thread To stem the continued decline in smoking incidence, the industry must rapidly move to a point where it can address cigarettes in a totally positive light The modern hi-fi segment ... has been growing

dramatically over the last five years. This growth has been spurred by the consumer desire for health protection, as achieved

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through particulate matter reduction and the industry response in offering low "tar" brands with heavy marketing support . . . Although the hi-fi segment is continuing its rapid expansion to a projected 50% by 1982, only three positionings are demonstrating vitality and durability among the freestanding low "tars": low "tar"/implied health, i.e. Carlton, True; extra flavor, i.e. Merit; social acceptability, i.e. Vantage. . . Low "tar"/implied health is the common area of leverage with all these entries.

680559100-9124 at 9100, 9101, 9110, 9120 (U.S. 21003).

2544. A November 14, 1978 document, titled "Low Delivery Cigarette Project For Brown & Williamson Tobacco Corp.," reported that, between 1974 and 1976, 60-74% of consumers believed that "low tar and nicotine cigarettes represent a major step in making smoking less harmful." Under the heading "'Health' vs. Image/Taste/Satisfaction," the document stated that B & W's marketing plan included "using acceptably Low Delivery numbers to provide assurance that the brand is at least at parity with its health-oriented competitors." 670133560-3690, 3572, 3581 (U.S. 87887).

2545. An October 1979 "History and Key Trends in the U.S. Cigarette Market," compiled by E.T. Parrack, B & W Vice President of Brand Management, confirmed B & W's knowledge that smokers turn to low tar cigarettes in response to health, not taste, concerns. 670624932-5364 at 4935 (U.S. 53869). The document contains the following statements, reflecting B & W's knowledge that the increase in filtered and low tar cigarette sales from the 1950s through the 1980s resulted from consumers' belief that these products were less harmful, as a result of Defendants' extensive marketing of these products:

The success of hi-fi brands is due in part to the large sums being spent to advertise them. Id. at 5279.

[Between 1957 and 1960] the consumer was bombarded with messages regarding high filtration. Id. at 5036. 1964-1975 —Emergence of brands using low "tar" as primary appeal . . . appearance of brands which actually based their appeal on low tar and nicotine numbers. Id. at 5275, 5277.

Two forces are driving the current high rates of brand switching: Smoker concern about personal health [and] Smoker concern about social censure . . . successful new brand development would have to be aimed at and satisfy the smoker needs arising out of these two key forces. Id. at 5165.

Regarding the perceived health benefits of menthol cigarettes, the compilation stated:

[T]he split between menthol and Hi-Fi continued. Smokers were forced into a trade off of Hi-Fi vs. menthol. But was it indeed a trade-off? As we have noted, Salem was perceived as a relatively mild cigarette, and menthol itself had been promoted for years for soothing throats irritated by smoking and was the cigarette used by many when they had colds. Thus Salem and other menthols could be regarded as equivalent to a Hi-Fi. Id. at 5036-5037.

670624932-5364 (U.S. 53869).

2546. A June 2, 1980 B & W memorandum from Brian R. O'Hare to J.F. Roberts stated:

It now becomes necessary, "in light of the increasing importance of the smoking and health issue and Kent's repositioning as the health reassurance brand[,] to implement the remaining phases of B & W's plan to position Kent as a less harmful brand. The memorandum noted the importance of implementing this plan" as the smoking and health

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issue becomes more important on a worldwide basis.

660942115-2116 at 2115 (U.S. 53580) (emphasis in original).

2547. In a July 2, 1982 B & W report, titled "What Are the Obstacles/Enemies of a Swing to Low `Tar' and What Action Should We Take?," B & W Assistant General Counsel J. Kendrick Wells gave his views that B & W should respond to attacks on low delivery cigarettes in the following manner:

B & W will undertake activities designed to generate statements by public health opinion leaders which will indicate tolerance for smoking and improve the consumer's perception of ultra low "tar" cigarettes (5 mg. or less). The first step will be the identification of attractive scientists not previously involved in the low delivery controversy who would produce studies re-emphasizing the lower delivery, less risk concept. Through political and scientific friends, B & W will attempt to elicit from the administrative and legislative branches of the federal government, and perhaps voluntary health groups, statements sympathetic to the concept that generally less health risk is associated with ultra low delivery cigarette consumption. The program is designed to produce statements of sufficient news interest to reach the public through the media. In addition, B & W would seek to generate spontaneous mainstream media articles dealing with component deliveries, much as the old Readers Digest articles.... B & W will urge the industry to sponsor research in the ultra low delivery cigarette area which turns the principles used against the industry to positive use. . . . Industry positions favoring the low delivery cigarette can be effectively presented, but must be carefully structured.

680592164-2169 at 2164-2168 (U.S. 21009); (no bates) (U.S. 76213); Wells WD, 46:11-49:3.

2548. A March 27, 1985 B & W memorandum from E.T. Parrack, Jr., Vice President of Domestic Marketing, to Thomas E. Sandefur, Jr., B & W's CEO, stated that "health reassurance" is one of the "`rational' benefits" that have been grafted on to the two "basic benefits" that cigarettes have always offered to consumers. The two basic benefits are: "physical smoking satisfaction" and "Emotional (image/social) reinforcement: `The me I want to be.'" 528010755-0759 at 0755, 0757 (U.S. 20926).

2549. A 1999 B & W document, "Current Trends in Lights and Ultra Lights," stated under the heading "Learnings": "Consumers were ready for low tar before Marlboro Lights. Health concerns.... Anti-smoking pressure and PM's initiative ignited the process. Manufacturers' focus on Lights accelerated the growth." 430403186-3194 at 3193-94 (U.S. 22084).

2550. According to Sharon Smith, former B & W Director of Marketing Services and Operations, her consumer research indicated that smokers of light cigarettes, as compared to ultra light smokers, "did not have the same level of understanding of the tar numbers, and instead spoke in terms of full flavor versus lights," and as a result "rely primarily on brand descriptors like `light,' `medium,' and `ultra light' as relative indicators of the cigarette's tar level," and that they "think of light and ultra light cigarettes as being lower in tar and nicotine." Smith WD, 76:4-12.

(3) Brown & Williamson's Public Statements About Low Tar Cigarettes

2551. Since at least 1981, Brown & Williamson's public position has been that "it has never marketed filtered or low tar cigarettes as less harmful than regular

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cigarettes." Similarly, Sharon Smith, former Director of Marketing Services and Operations at B & W, denied that the words "low tar" communicates any health benefit, stating that "I would not say that low tar implies any sort of benefit, other than it's lower in tar." Ivey WD, 51:9-13; Smith WD, 66:19-22.

2552. A June 17, 1999 B & W Question & Answer ("Q & A"), labeled a "working document," stated that B & W did not lower the tar and nicotine in its cigarettes for health reasons and that B & W does not "claim that [low tar] cigarettes are any better/safer for you than any other cigarette on the market." 127030138-0138 (U.S. 22113).

2553. In March 1999, Nicholas Brookes, B & W Chairman and CEO from 1995 to 2000, denied that B & W had conducted research on consumer perception of light cigarettes and whether reduced risk was associated with these cigarettes. Brookes PD, *United States v. Philip Morris*, 3/31/03, 162:13-163:9.

2554. Sharon Smith has claimed that "Brown & Williamson has only used the terms 'low tar' or 'light' with respect to its cigarettes to communicate lighter taste— lighter taste and nothing else," and that "consumers have overwhelmingly responded that lighter taste is the only benefit that Brown & Williamson's advertising for its low tar brands has indicated." Similarly, Susan Ivey has also said that "[m]y experience is that most consumers choose lights for taste, because they prefer a lighter tasting cigarette." Smith WD, 50:7-51:2; Ivey WD, 57:18-21.

2555. B & W states on its website: "We do not believe that people who are concerned about the health risks of smoking should view lower tar products as an alternative to quitting." TLT1040050-0055 at 0055 (U.S. 88620); Ivey WD, 63:9-16, 64:1-6; Smith WD, 61:19-23.

2556. Despite the substantial evidence already referred to, supra, that B & W was aware that consumers interpreted its low tar brand descriptors to be indicative of a less harmful cigarette, in May 2004, B & W stated on its website that brand descriptors were intended only to communicate taste:

Cigarette brands in the U.S. are usually identified on packs, cartons and advertising as belonging to the following categories: "Ultra Lights" or "Ultra Low Tar," "Lights" or "Low Tar," and "Full Flavor. . . ." Recent published studies suggest that the majority of smokers use descriptors to guide their product selection based on taste.... It is not Brown & Williamson's intention to suggest that any individual brand, regardless of the category descriptor terminology used, or tar yield, is safer than any other.

TLT1040056-0062 at 0061 (U.S. 88628); Ivey WD, 70:5-14.

d. BATCo

(1) BATCo's Research on the Low Tar Cigarette Category

2557. BATCo's research documents establish that the company has long known and intended that its advertisements and marketing for low tar cigarettes, featuring claims of lowered tar and nicotine and

"light" and "ultra light" brand descriptors, contributed to and reinforced consumers' mistaken belief that low tar cigarettes are better for their health, and caused consumers to smoke them for this reason.

2558. A 1972 BATCo memorandum pointed out that health reassurances usually result in increased sales:

Over the years manufacturers have provided the public with a variety of platforms to ... "enhance the association in smokers minds between the benefits of

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smoking and our cigarette products." Increasingly, by implication, these claims have turned to a health orientation and very often the closer these have come to relating the smoking benefit to being one of "health" the more successful has been the brand.

100006864-6868 at 6864 (U.S. 20076).

2559. A May 3, 1974 note from Anthony D. McCormick of BATCo's Legal Department "[t]o all Members of the Conference" enclosed a document for discussion by BATCo employees at an upcoming company conference. Under the heading "SMOKING AND HEALTH ASSUMPTIONS," the discussion document stated: "On legal grounds alone it will continue to be to the industry's advantage not to make explicit health claims. The industry will make increasingly competitive use of products for which health claims are implied." 100428581-8599 at 8581, 8583, 8599 (U.S. 34649).

2560. A March 29, 1976 BATCo report, titled "The Product in the Early 1980s," stated that "opportunities exist for filter and cigarette design which offer the image of 'health reassurance.'" 11069974-9982 at 9974, 9979 (U.S. 20268).

2561. An internal April 14, 1977 BACo memorandum by P.L. Short, Manager of BATCo's Marketing Department, describing BATCo's marketing plan, stated that "[a]ll work" would be

directed toward providing consumer reassurance about cigarettes and the smoking habit . . . provided . . . by claimed low deliveries, by the perception of low deliveries and by the perception of "mildness." Furthermore, advertising for low delivery or traditional brands should be constructed in ways so as not to provoke anxiety about health, but to alleviate it, and enable the smoker to feel assured about the habit and confident in maintaining it over time.

100427791-7800 at 7794 (U.S. 34641) (emphasis in original).

2562. An April 1982 document, titled "Conference on Marketing Low Delivery Products: January 1982," stated: "The BATCo.'s Board policy stated in the Market Expansion document is to lead the industry in the trend towards lowering deliveries . . . [C]onsumers will probably believe that lower deliveries mean less 'risky' products." 690120722-0756 at 0726, 0728 (U.S. 21043); Ivey WD, 80:14-81:9.

2563. An undated BATCo document, titled "Lights Segment Project Consumer Insight Into Smoking Lights," listed under the heading, "How to Create a Positive Lights Culture," the following three ways to "differentiate the lights from full flavor smoking . . . Color, Cues e.g. Blues & Whites . . . Lighter Lifestyles e.g., water related outdoor fun activities . . . Light symbols e.g. Bubbles[;] Air balloons[;] Light winds." 321546706-6724 at 6719 (U.S. 46770).

2564. Susan Ivey, who worked in marketing for BATCo from 1990 to 1999, admitted that, in her experience, "while many smokers know they are buying a lights product, their actual understanding of what the specific delivery numbers are is quite limited. For example, consumers might know they are smoking a lights version of a brand, but they wouldn't know what the machine-measured tar yield was for that cigarette."

2565. Similarly, a September 1992 BATCo Business Review prepared by Norma Simamane, BATCo Lights Project Manager, stated that "[g]enerally, the specific meaning of Tar and Nicotine is not understood by consumers. However, they perceive a strong association between the numbers with 'perceived health effects.' Basic understanding is that the higher the numbers, the stronger the negative health

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effects.'" Instead of precluding use of advertisements intimating that low tar cigarettes are healthier, the document stated: "Reference to overt communication of health related issues must be avoided." The document also advocated using brand descriptors such as "'Light,'" "'Ultra" and "'Suave (indicating Lights)" as opposed to tar and nicotine yields, because "T & N numbers . . . tend to highlight negatives and to remind consumers of the negatives of smoking thereby increasing the 'guilt' feeling." The document further stated: "The importance of the Lights segment is demonstrated by the growth trend that is 5 times faster than total world cigarettes volume. . . . In addition to being profitable, future projections indicate an even faster growth of lights." Ivey WD, 76:10-12. Ivey WD, 82:4-11, 76:10-18; 321683062-3099 at 3087, 3090, 3065 (U.S. 28586).

2566. A January 1995 research report prepared for BATCo, titled "Silk Cut Brand Status Check & Concept Evaluation," stated, under the heading "Attitudes to LTN [low tar and nicotine]":

There was universal agreement amongst ff [full flavor] smokers that they would switch to LTN if and only if a lights brand with taste could be produced. But that seemed almost a contradiction in terms for many of them as many ff [full flavor] smokers described a direct correlation between tar and nicotine levels and taste. Regular lights brands smokers—even Marlboro Lights—were reassured about health concerns by choosing to smoke such brands.

800056515-6581 at 6526 (U.S. 31643).

2567. A BATCo document bearing the heading "Barclay Business Review 1996" concludes both that consumers rely on product packaging and marketing (as opposed to FTC tar and nicotine deliveries) to indicate low tar level and that reduced tar level significantly increases purchase interest:

Consumers—with the exception of 1MG [tar cigarette] smokers—are not able to quote correct tar/nic deliveries of the brand they are smoking currently. This means that the consumer does not segment the market in terms of deliveries but he uses colour coding and descriptors to distinguish FF, Lights and Ultra Lights . . . shelving according to [FTC tar and nicotine] deliveries has a positive impact on the awareness of the Lights category in general. The willingness to try Barclay increased significantly.

700767443-7457 at 7452 (U.S. 22123); accord 321184656-4672 (U.S. 22045).

2568. In a BATCo Kent Super Lights Brand Plan, BATCo discussed ways in which to "accelerate its lights segment growth." Under the heading of "Key Insights from 1997," the plan reported that "[f]lights

franchise is skewed towards upscale 35 + female smokers, this is consistent with associated smoker (who is assumed to be health conscious)" and that "[h]ealth conscious' brand choice is seen by ASU [adult smokers under] 30s as a purchase pattern for 40 + smokers." 321551304-1323 at 1304, 1305 (U.S. 22057); Ivey WD, 78:1-13.

2569. A "Qualitative Research Report on Light Cigarette Brand Perceptions" dated January-February 1997, stated, under the heading "Benefits Sought From Lights":

Most older males pointed out that the main benefits of Lights was the fact they were less harmful. This factor was also very important for younger females, who often said they "had to think of the future." Some of the girls were sure Lights didn't form so strong smoking habits, [believing that] "it's easier to give up smoking if one smokes lights."

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The "Conclusions" Section stated: "Light brands are primarily perceived as ... less harmful for one's health (easier breathing, better physical state in general). . . Some of the females perceive the concept of ULTRA LIGHTS as ... the last step before giving up smoking," and noted that 18-24 year olds "ranked health care features of lights most highly." 760008596-8803 at 8686, 8692-8693 (U.S. 54588) (Confidential).

2570. A 1999 BATCo document, titled "Lightning—Extreme Smoking Regimes Testing Results and Implications for IT and The Light-Mild Issue," cited a "Smokers' attitudes report" which showed that more smokers perceive the terms "light" and "mild" to indicate low tar than to connote taste or any other characteristic. 321989078-9276 at 9121-9122 (U.S. 28819).

2571. A 1999 BATCo presentation on marketing in Europe bearing the headings "Research" and "Heathrow Proposition" stated that many smokers want to "trade down" in tar in order to minimize risk and harm caused by their cigarettes:

[S]trong potential for a new low tar brand—many smokers looking to trade down.... Low tar Minimise Risk, Maximise Pleasure. . . . New Product Proposition Low tar product with smoother yet fuller smoking experience[.] All, bar quitters, welcome proposition—more fun/enjoyment, less harm.

321628040-8076 at 8056, 8059, 8061 (U.S. 22060).

2572. A January 2001 BATCo file, titled "Consumer Concept Trial Notes Jan 2001 Project Baltec II," contains a section dated January 10-12, 2001, titled "Philadelphia—General Impressions and Summary," that revealed the results of consumer research on low tar cigarette smokers. The document stated: "There was some guilt over smoking ... some had switched to lights with the belief that lights are better for them. . . . General feeling that lights are healthier." 325238922-8994 at 8981, 8991-8994 (U.S. 22079) (Confidential).

2573. A January 10, 2001 BATCo document written by Steven Coburn, titled "Project Balcony," that referenced Philadelphia, Pennsylvania marketing studies related to proposed campaigns, stated "3rd board impresses the low nic/tar idea—appears to imply healthier though no cig is healthy." 325239028-9036 at 9029 (U.S. 22083). An identically titled document from the same author dated January 11, 2001, stated under the heading "Benefit": "Lights are supposed to be more healthy." 325239035-9036 at 9035 (U.S. 22083). A BATCo document dated January 15, 2001 with the same title and author, but which

referenced Santa Monica, California marketing studies related to proposed campaigns, stated "less tar nic—less harmful." 325239014-9027 at 9015 (U.S. 22082).

(2) BATCo's Public Statements About Low Tar Cigarettes

2574. Susan Ivey claimed that BACo's public position was that the use of low tar brand descriptors was "not intended to make any health claims," and was "not meant to imply that light or ultra-light cigarettes are less harmful." Ivey WD, 71:20-72:3.

e. American Tobacco Marketing of Low Tar Cigarettes

2575. American Tobacco's brands included Carlton, Lucky Strikes, Pall Mall, and Tareyton, until they were acquired by B & W in 1995. Gesell PD, *State of Minnesota v. Philip Morris Inc.*, 9/18/97, 6:10-17; 117:3-15; 25:23-26:3; 93:2-13. Like the other. Defendants, American Tobacco used descriptive terms and low FTC tar ratings to convey misleading and unsubstantiated

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health messages to the public regarding their low tar cigarettes.

2576. For nearly 30 years, American placed advertisements in nationally-circulated magazines that emphasized Carlton's purportedly low tar. For instance, American's advertisements in *Time* and *Newsweek* in 1964 for Carlton cigarettes stated:

Everything about Carlton is selected and crafted to produce this one result: A cigarette that is low in tar¹ and nicotine—yet high in smoking pleasure. Carlton is so low in tar¹ and nicotine that we print test results on all packs, on all cartons Carlton—lightest smoke of all. See for yourself.

ATX040070514-0519 at 0514(U.S. 21125); see also ADV011 1575-1579 (U.S. 3028); ADV107 00200022 (U.S. 88689); ADV107 0023-0027 (U.S. 88690) (1964 Carlton advertisements).

2577. A June 8, 1964 report prepared by Gardner Advertising Company for American Tobacco, titled "A Summary Report of Two Carlton Research Studies," summarized "Carlton Concept Research" and "Carlton Penetration Research." The report stated as a "Highlight" that "Based on Ad Exposure Before Product Availability," smokers "[s]law CARLTON as a high filtration cigarette, low in tar and nicotine. Although the advertisement made no mention of it, there was a tendency to interpret CARLTON as lower in tar and nicotine, safer, less harmful." ATC25036443706 at 3650 (U.S. 87891) (emphasis in original).

2578. A 1967 Annual Report of American Tobacco shows that its Carlton cigarette, which "was developed to appeal to those smokers preferring a light cigarette—one that is low in tar"—and nicotine yield," achieved "sizeable sales increases in 1967" resulting from "favorable publicity" as a low tar, low nicotine cigarette. MNAT00029170-9201 at 9176 (U.S. 21222).

2579. In 1968, American's Carlton advertising stressed the fact that it was found lowest in "tar" by U.S. Government testing and cited its "unique Air-Stream Filter" as the source of its ability to reduce tar to 4 mg. (as compared to what was then the industry average of over 20 mg.). ATX40397140-7141 (U.S. 85020); MNAT00386652-6652 (U.S. 85112); Dolan WD, 124:12-17.

2580. American Tobacco's Carlton advertisements in the 1970s emphasized FTC machine test yields to support the company's "low tar" health claim:

1973: "For 10th straight published Gov't Report Carlton. Still lowest in `tar' of all regular filter kings tested . . . For the last 10 consecutive Government Reports. Carlton has been found lowest in `tar' of all regular filter kings tested. That's every Report since October 1968." ATX040070514-0519 at 0515 (U.S. 21125).

1974: "Of all filter kings tested: Carlton is lowest. For the 12th straight time, the U.S. Government has reported Carlton to be the lowest in tar of all filter kings tested." (U.S. 87178).

1975: "Of all filter kings tested: Carlton is lowest. Look at the latest U.S. Government figures for other brands that call themselves low in tar." US 4605; Biglan WD, 281:17-283:22; (U.S. 87183).

1975: "U.S. Government Report shows only one is lowest ... Carlton." (U.S. 88691).

1978: "U.S. GOVERNMENT RPORT: CARLTON LOWEST. Carlton claim confirmed. Many cigarettes are using national advertising to identify themselves as `low tar.' Consumers, however, should find out just how low these brands are-or aren't. Based on U.S. Government Report:

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14 Carltons, Box or Menthol, have less tar than one Vantage. 11 Carltons, Box or Menthol, have less tar than one Merit. 11 Carltons, Box or Menthol, have less tar than one Kent Golden Lights. 6 Carltons, Box or Menthol, have less tar than one True. . . . This same report confirms of all brands, Carlton Box to be the lowest with less than 0.5 mg. tar and 0.05 mg. nicotine." (U.S. 5961); (U.S. 5978).

1978: "Carlton is lowest. See how Carlton stacks down in tar. Look at the latest U.S. Government figures [table comparing Carlton favorably with Winston Lights, Vantage, Salem Lights, Kent Golden Lights, Merit and True cigarettes]" (U.S. 5811); (U.S. 5707).

1978: "Based on latest U.S. Government Report: Carlton is lowest. See how Carlton stacks down in tar. Look at the latest U.S. Government figures [referring to table indicating Carlton has lower tar than Winston Lights, Vantage, Salem Lights, Kent Golden Lights, Merit and True cigarettes]." (U.S. 5948).

1983: "Read the numbers on the pack. Carlton is lowest." (U.S. 7637); Biglan WD, 281:17-283:22.

ATX040070514-0519 (U.S. 21125); 03496228-6630 at 6309, 6310, 6580 (U.S. 20057).

2581. A September 1973 report prepared for American, titled "Tareyton, Iceberg 10, Carlton," discussed marketing strategies for these three brands. In the "Advertising Strategy Statement" for Carlton, the report noted that in focus group interviews "the `health' problem is most frequently mentioned, but people tend to ignore the negatives and continue to smoke out of pleasure or habit." The report went on to say that "Carlton's copy strategy for 1973/1974 will continue to be straight forward and factual, appealing to those smokers whose concern for `health' hazards leads them to seek out a cigarette with truly low `tar' and nicotine content." ATC2472182-2243 at 2216, 2225 (U.S. 87892).

2582. When Eric Gesell, who worked for American from 1963-1994, was asked what American intended by its Carlton cigarette advertisements from 1974 and 1978 with the slogans "Carlton is lowest" and "Carlton lowest," he admitted that, "[w]hat [American is] doing in this ad is using the FTC

figures in order to try to sell a cigarette." Gesell PD, *State of Minnesota v. Philip Morris Inc.*, 9/18/97, 5:8-25, 6:5-6, 6:10-17, 115:19-118:14; ATX040070514-0519 (U.S. 21125).

2583. When Gesell was asked what the significance was of a cigarette being lower in tar, he answered that: "It's lighter, lighter taste." When asked: "Isn't there also an implied health claim there?," he denied it: "No, there isn't." Gesell also claimed that the company "didn't have an understanding that people tended to smoke low-tar cigarettes because they were concerned about their health." Gesell PD, *Minnesota*, 9/18/87, 5:8-25, 6:10-17, 97:8-13, 130:25-131:4.

2584. Carlton's 1981 Marketing Plan, dated August 18, 1980, discussed ways to make Carlton cigarettes "the brand of the 1980's." The forward to the plan noted that "[t]he Ultra Low segment of the market is continuing to grow rapidly as more and more smokers search for smoking pleasure at tar levels more in tune with the mores of the times. Carlton, as innovator and category leader, is well poised to capitalize on this trend by its inherent positioning." ATC0735197-5261 at 5199 (U.S. 87893) (emphasis in original).

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2585. A 1983 letter to H.W. Bahrenburg, American Tobacco Product Manager, from Tom Keane of Laurence, Charles & Free, Inc., discussed advertisements for American's Carlton cigarettes, stating that American would proceed with the advertisement that best communicated that Carlton was "'lowest'" in tar and nicotine:

Our recommendation was to go with the Bad—"Compare" with the "U.S. Gov't Report." This ad did very well in the general low-tar area and in fact it was the only ad which showed a "lowest" playback on the primary question "What do you get out of this ad?"... [W]e are proceeding with "Compare" and "U.S. Gov't" on the new ... ad.

The advertisements attached to the letter stated: "Compare to your brand Box King—lowest of all brands—less than 0.01 mg. tar, 0.002 mg. nic. Carlton is lowest U.S. Gov't Report—no brand lower than Carlton Box King—less than 0.5 mg. tar, 0.05 mg. nic FTC Report Mar. '83." 991034809-4816 at 4809, 4816 (U.S. 85113); see also (U.S. 7536) (1983 Carlton advertisement that appeared in *Sports Illustrated* magazine).

2586. An August 4, 1983 American Tobacco memorandum from John A. McGinn, Product Manager, to W.J. Moore, Marketing Director, titled "CARLTON Slims," stated: "At a 6 mg. tar level, this 100 mm product would be responsive to those consumers seeking low tar.... It would also extend CARLTON's 'lowest' position to yet another cigarette category." 991341428-1440 at 1428 (U.S. 85114).

2587. A February 1987 magazine advertising campaign for Carlton also prominently featured claims for tar and nicotine reduction:

If you smoke Compare your cigarette to Carlton. If you're interested in smoking an ultra low tar and nicotine cigarette, you should compare the tar and nicotine content of your cigarette to Carlton. Most cigarettes sold today have 10 times the tar and nicotine of Carlton Box Kings & Box 100's.

Another Carlton advertisement campaign from the late 1980s also had lowest tar as its centerpiece and implied a United States Government endorsement, listing Carlton as having lower tar than Philip Morris's Merit and RJR's Vantage cigarettes:

If you smoke.... Here's the latest comparative information for smokers who want lower tar & nicotine . CARLTON became the first brand to put these figures right on the pack.... In the last 21 reports issued by the U.S. Government, no cigarette has tested lower than Carlton.... If you are interested in the tar content of your cigarette, you should compare the tar content of your cigarette vs CARLTON. If you are interested in the lowest... LATEST U.S. GOV'T REPORT COFIRMS: no brand lower than Carlton Box King.

MNAT00746229-6229 (U.S. 21230); (U.S. 8246) (1986 Carlton advertisement that appeared in Sports Illustrated magazine).

2588. A February 29, 1988 American Tobacco memorandum from R.E. Smith, Director of Brand Management, to K.P. Noone, Product Manager, stated:

The singular objective of all consumer communication should be registering CaHton's lowest positioning. We must continue to hammer this lowest message home to our current franchise. It's why they came to Carlton. As switching losses to Now show, it's the best way to lure them away. . . . It is my belief that most smokers will continue to seek lower tar. They have switched for it in the past, often several times.

991216857-6858 at 6857 (U.S. 85115).

2589. In the 1990s, American's advertisements for Carlton also featured purported

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testimonials of smokers who claimed to have reduced their exposure to tar by switching to Carlton, including the following:

1994: "I switched to less tar. Like many other smokers, I wanted less tar. But I thought I'd have to sacrifice flavor ... and isn't that what smoking's all about? Then I tried Carlton ... and I switched! Carlton is the lowest in tar . . . I figure if you're going to switch to less tar, why not go the distance!" (U.S. 9257); ATX040268971-8971 (U.S. 21127).

1994: "I switched to lowest tar." (U.S. 9285).

1994: "If you want less tar please try Carlton. . . . U.S. Gov't. Test Method confirms of all king soft packs: Carlton is lowest in tar and nicotine." 970469347-9474 at 9460 (U.S. 85104).

See also 970469347-9474 at 9452-9457 (U.S. 88612) ("Carlton Creative" collection of advertisements including Carlton's "I Switched To Lowest Tar" advertisements); 970557462-7465 (U.S. 85116) (Dec. 6, 1993 letter on American Tobacco letterhead from James M. Murray to Nancy Gavlick attaching similar "print ad comps" for Carlton).

2590. American Tobacco also placed advertisements for Carlton in the 1990s claiming that smokers could smoke ten packs of Carlton and still receive less tar than they would from smoking one pack of Marlboro, Camel, Winston, Kent, or Viceroy. (no bates) (U.S. 9182) (1993 advertisement in Sports Illustrated magazine stating: "10 packs of Carlton Menthol have less tar than 1 pack of these brands"); (no bates) (U.S. 9122) (1992 advertisement noting same); Biglan WD, 281:17-283:22; (no bates) (U.S. 9093) (1992 Carlton advertisement stating same); 970469347-9474 at 9464-9466 (U.S. 85104) (1990s Carlton advertisements stating same); (no bates) (U.S. 9186) (1993 advertisement stating: "A WHOLE

CARTON OF CARLTON ... HAS LESS TAR THAN 1 PACK OF THESE BRANDS. . . . Carlton is lowest in tar and nicotine"); Smith WD, 68:15-21.

2591. A September 13, 1994 document prepared for American Tobacco, titled "LCF & L Agency Orientation Handbook," describes American's print advertising strategy to

[p]rompt competitive target smokers to question their Brands Tar Level and present CARLTON as a contemporary, satisfying answer for those smokers seeking lower tar. The strategy and presentation should start and build from a common 'truth' in our prime prospects mindset—to serve as a reminder that they too want less tar.

The "Positioning Statement" was: "Carlton is the brand chosen to 'switch' to in the ULT category because it is the lowest in tar and nicotine, as confirmed by the U.S. government FTC method. By smoking Carlton you get the lowest and you do not have to sacrifice flavor." 970469347-9474 at 9354, 9411 (U.S. 85104).

2592. In 1974, American Tobacco advertised that by switching to Lucky Strikes, smokers could: "Cut your 'tar' in half with Lucky 100's." (no bates) (U.S. 4405); (U.S. 4415); Smith WD, 74:314; Ivey WD, 52:4-8.

2593. American Tobacco advertisements for Pall Mall Gold cigarettes in the 1950s and 1960s featured claims of "mildness" and lowered tar and nicotine, and stated: "You make out better at both ends." (no bates) (U.S. 88720) (1953 Life magazine advertisement); (no bates) (U.S. 87209) (1969 Life magazine advertisement); ATX040696413-6413 (U.S. 88613*) (1968 Time magazine advertisement); (no bates) (U.S. 87476) (1968 Time magazine advertisement); MNAT00282147-2147

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(U. S. 88614) (1969 Life magazine advertisement).

2594. A 1976 advertisement for American's Pall Mall Extra Mild cigarettes published in Sports Illustrated magazine stated: "Lower in tar than 95% of all cigarettes sold. De-tarred but not de-tasted." (U.S. 5232); MNAT00742048-2048 (U.S. 21229) (1976 New York Post advertisement stating same).

2595. A 1954 Tareyton advertisement explicitly stated that its cork filter provided health protection, stating: "Tareyton's genuine cork tip protects your lips." 696000888-0916 at 0913 (U.S. 21387).

f. Lorillard

(1) Lorillard's Marketing of Low Tar Cigarettes

2596. In a May 20, 1958 letter to Morgan J. Cramer, Lorillard's Director of Export & Government Operations, the General Manager of a Venezuelan distributor of Kent cigarettes noted that "the health angle" had been "our main selling and advertising point" for Kent advertising in the United States. The letter added: "We have succeeded in covering a good part of the American colony who are by far the majority of people who are sticking to Kent. No doubt they are influenced by American advertis and no doubt the mildness of Kent chimes in with the 'protection' angle." 508397-8398 (U.S. 32365).

2597. A July 31, 1963 Lorillard memorandum from R.F. Kieling, Director of Market Research, to M.J. Kramer, President of Lorillard, with the subject heading "1963 Gallup Attitude Survey on Smoking,"

reached the following conclusions concerning the public's perception of the "safest" cigarette brand based on Gallup polling:

As in the past two studies (1959 and 1962) Kent leads the field here, with 18% of all cigarette smokers saying this brand is "safest" to smoke. Among filter smokers, Kent rates even higher (21%). . . . Winston and Salem are second and third choice brands, although considerably below KENT. . . . Filter and mentholated cigarettes are considered most favorably, with most people voting them "very safe" or "moderately safe...."

The "General Wrap-Up" stated: "Although the American public is considerably more antagonistic towards the cigarette industry this year, the Kent brand continues to stand alone as the one brand believed 'safest' by a significant proportion of other brand smokers, as well as among Kent smokers themselves." 89836071-6076 at 6074-6076 (U.S. 32095).

2598. A September 15, 1964 Lorillard memorandum from M. Yellen to Morgan J. Cramer, President and CEO, concerning Lorillard's marketing and sales policies, stated that, for several months before the release of the first Surgeon General's Report in January 1964, "LARK [a Liggett cigarette brand] was setting a base for future sales activities through the use of hospitals via rumors or otherwise . . . that medical scientists endorse LARK as the safest cigarette. This marketing technique on the part of LARK proved successful." This memorandum also acknowledged that Lorillard's marketing of Kent cigarettes as a less harmful brand contributed to its increased sales:

As all of us are aware, KENT was marketed as a "safer" cigarette for the smoker who was concerned about smoking and health. In 1956 when an innocent third party (Reader's Digest) created an awareness to the consumer that KENT was the "safest" of all popular cigarettes, Lorillard exploited this advantage so that within a short period of two years the KENT volume grew from

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less than four billion cigarettes to thirtyeight billion annually . . . I feel we were successful in accomplishing our objective and maintaining the safety image of KENT among consumers sensitive to health.

01124257-4265 at 4259, 4257-4258 (U.S. 20033).

2599. In the early 1970s, Lorillard returned to the Micronite filter, redirecting its efforts to the product feature it had promoted for decades as providing health benefits to smokers. With respect to Kent's "marketing strategy," the "Lorillard Brand Reviews & Projections 1970/71" report stated: "Losses sustained as a result of moves to higher filtration brands will be stemmed through revitalization of the Kent health assurance heritage provided by the 'Micronite' Filter." 04105292-5384 at 5296 (U.S. 29394).

2600. A May 1971 Report prepared for Lorillard, titled "A Study of the Meaning of the Micronite Filter to Smokers Today," demonstrated that Lorillard targeted "health-anxious" smokers with "health reassurance:"

The marketing strategy has been to hold on to its current Kent smokers and to attract to-fl [low tar] smokers by promising taste satisfaction plus health reassurance. With the growth of the hi-fi [full-flavor] segment, a third target is those health-anxious hi-fi smokers who are looking for more taste satisfaction than these current hi-fi brands can deliver.

The report added that

Kent and micronite filter may be, after years of advertising, strongly associated in smokers minds Prior research suggests that dropping micronite for five years had little effect on Kent's health filter image. This does not mean, however, that if Kent had not dropped micronite for those 5 years that Kent might not have been even more strongly perceived as a health brand.

03340192-0201 at 0195-0196 (U.S. 29265) (emphasis in original).

2601. A Lorillard document circa 1972, titled "Kent Status," stated:

Kent became a major brand after the 1957 Reader's Digest article had proclaimed it as the brand with the most effective filter. In the next years of gains and consolidation, the micronite filter was advertised as a unique Kent benefit, giving health reassurance to its growing franchise of older, better-educated, health concerned smokers.

03300409-0418 at 0411 (U.S. 29263).

2602. A document, titled "Kent Local Newspaper Support Summary Apr/August '73," under the heading "Kent Creative Strategy," stated: "1) Consumer Benefit To convince smokers that Kent offers a combination of satisfying taste... With health reassurance through superior filtration." 03078097-8110 at 8100 (U.S. 74705*) (emphasis in original).

2603. A March 21, 1978 "Kent Advertising Brief" was prepared for the consumer research firm Foote, Cone and Belding, to provide "the background and brand information necessary to develop a global creative strategy for the Kent brand In a section titled, "Brand Positioning," the brief recommended that "[a]dvertising and support materials should emphasize Kent's mildness in taste and health terms. The white pack and tipping will be exploited to reinforce this positioning." Also in this section, it was noted that "Kent Deluxe will present an image consistent with the King Size styles in offering health reassurance." In a section, titled "Target Audience," the brief stated that "[a]s the Smoking and Health controversy expands, it is assumed that some smokers from all socioeconomic and age groups will be prepared

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to switch to milder, healthier brands which provide an acceptable taste and prestige." The brief maintained that "we wish to try and develop advertising for the Kent parent brands which clearly offers the smoker health reassurance The Come/Stay campaign goes some way to projecting a health image for Kent while retaining a taste message and communicating prestige." 661076440-6453 at 6445, 6446 (U.S. 53620).

2604. On March 21, 1978, a "Kent Golden Lights Advertising Brief" was prepared for Foote, Cone and Belding, to provide advertising guidelines for Kent Golden Lights, that stated: "In industrialized nations the target consumer is unlikely to need education on the benefits of smoking low deliver [sic] products in general terms Prospective Golden Lights' consumers will know and understand the vocabulary of mildness, low tar and nicotine." 464012420-2429 at 2424 (U.S. 47672).

2605. Lorillard's implicit health claims in Kent advertisements from the 1970s and 1980s included the following:

1972: "Micronite filter. Mild, smooth taste. For all the right reasons. Kent." (U.S. 3785); (U.S. 87460); (U.S. 3837); (U.S. 10229); (U.S. 3797); (U.S. 3816); see also (U.S. 10257); (U.S. 3932); (U.S. 3949) (1973 magazine advertisements noting same).

1982: "Kent. When you know what counts." (U.S. 7275); U.S. 7379) (1983 magazine advertisement noting same); (U.S. 7504); (U.S. 7702); (U.S. 7746) (1984 magazine advertisements noting same).

2606. In 1966, Lorillard introduced True brand cigarettes. Martin Orlowsky, Chairman, President, and Chief Executive Officer of the Lorillard Tobacco Company, admitted that Lorillard's True advertisements were targeted toward smokers who, due to their concerns about health risks, were seeking a low-tar cigarette. Orlowsky TT, 10/13/04, 2288:24-2289:19.

2607. A report, titled "Lorillard Brand Reviews & Projections 1970/71," stated that one of True's "marketing objectives" was to "[s]eek out highly health-conscious smokers from all filter brands." One of True's "marketing strategies" was to "[p]roject TRUE's low tar and nicotine benefit in a way that is compelling to health oriented smokers." The report also listed the following as the "copy strategies" for True: "1. Capitalize on the basic True low tar and nicotine image and the thought that health-conscious smokers have devoted to the cigarette/health issue [and] 2. Switch to True characterized as being the logical, appropriate and popular thing to do." 04105292-5384 at 5328-5329 (U.S. 29394).

2608. Lorillard's True advertisements in the early 1970s made the following statements, which implied that switching to True brand cigarettes would provide health benefits:

1971: "Think about it. Doesn't it all add up to True?" (no bates) (U.S. 3436).

1973: "U.S. Government tests show True lower in both tar and nicotine than 98% of all other cigarettes sold Think About It." (no bates) (U.S. 4029); see also (no bates) (U.S. 3846) (1972 True advertisement); Biglan WD, 233:20-235:22; (no bates) (U.S. 4221) (1974 True advertisement).

1974: "True. Easy on your mind. Easy on your taste . . . because True is so low in tar and nicotine, every cigarette is as easy on your mind as it is on your taste. Think about it." (no bates) (U.S. 4491); see also 03496228-6630 at 6271 (U.S. 20057) (circa 1974 True advertisement noting same).

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2609. Lorillard's True advertisements from the mid-1970s portrayed True as an acceptable alternative to quitting smoking, as the following examples show:

1974: "My wife bugged me into it, would you believe it? It seemed every time I'd light up a cigarette, my wife would put on that look . . . So, we had one of our little talks . . . Look hon, I said . . . would it make you feel better if I changed to a low tar and nicotine cigarette? She smiled. So I bought a pack of True next morning." 01767161-7161 (U.S. 74702).

1975: "Considering all I'd heard, I decided to either quit or smoke True. I smoke True." (no bates) (U.S. 4853); (no bates) (U.S. 4939); (no bates) (U.S. 5000) (1976 advertisement in Sports Illustrated magazine noting same); Biglan WD, 233:20 235:22.

1975: "With all the talk about smoking I decided I'd either quit or smoke True. I smoke True." (no bates) (U.S. 87206).

1975: "With all I've read about smoking and things I decided to: 1. Play as hard as I work. 2. Cut out the heavy lunches. 3. And either quit smoking or smoke True. I smoke True. The low tar, low nicotine cigarette. Think about it." 03496228-6630 at 6268 (U.S. 20057).

1975: "I thought about all I'd read and said to myself, either quit or smoke True. I smoke True." (no bates) (U.S. 10447); 03061394-1394 (U.S. 21700).

1975: "I'd heard enough to make me decide one of two things: quit or smoke True. I smoke True." (no bates) (U.S. 87462); 01408237-8237 (U.S. 21808); 03496228-6630 at 6269 (U.S. 20057).

Dolan WD, 125:1-5.

2610. As a 1981 FTC Report on cigarette advertising noted, Lorillard's True advertisements "incorrectly impl[y] that when the alternatives of quitting smoking or smoking a low `tar' cigarette are weighed, the low `tar' cigarette is the healthier option." FTC, 1981 Report at 2-12 to 2-13 (JD 004744).

2611. Several other True advertisements from 1974-1975 emphasized True's FTC method tar and nicotine measurements:

U.S. Govt. tests show True is lower in both tar and nicotine than 98% of all other cigarettes sold. That means True is not only gentle on your mind, it's gentle on your taste.

No other cigarette can make this statement: U.S. Government tests of all cigarettes show True is lowest in both tar and nicotine of the 20 best-selling cigarettes. In fact, True is lower than 99% of all cigarettes sold Doesn't it all add up to True?

03496228-6630 at 6272, 6274 (U.S. 20057).

2612. A May 1987 report prepared for Lorillard, titled "AN EXPLORATORY STUDY—AN OVERVIEW OF THE TRUE BRAND," discussed smokers' perceptions of Lorillard's True cigarette. The report contained the following statements:

Use of the True brand or consideration of it via trial is viewed as an expression of health concern... Both True smokers and those who smoke other brands expressed awareness of the way True has been advertised. It was not uncommon to attribute initial trial of the brand to being attracted by that presentation of the brand. Respondents specified having noticed the emphasis on tar count and filter. . . . Based on these findings, it would appear important to continue to stress True as a low tar brand with taste, and the "specialness" of the filter, since those are clearly important factors in motivating trial, and

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in conversion to the brand.... The respondents were also asked whether they think the image of True has changed over a period of time. Most felt unable to answer this, but it was suggested that True stood alone originally, as the brand for the health concerned.

93359378-9437 at 9378, 9385, 9387, 9420 (U.S. 57295).

(2) Lorillard's Research on the Low Tar Cigarette Category

2613. Lorillard's internal research documents demonstrate that Lorillard conducted research not just on individual low tar cigarette brands, but on low tar cigarettes as a category. These documents

establish that Lorillard has long known and intended that its advertisements and marketing for low tar cigarettes, featuring claims of lowered tar and nicotine and "light" and "ultra light" brand descriptors, contributed to and reinforced consumers' mistaken belief that low tar cigarettes are better for their health, and caused consumers to smoke them for this reason.

2614. A November 13, 1973 presentation by Alexander Spears, a Lorillard scientist and later Lorillard's CEO, noted in a discussion of "Health psychology" that smokers' concern about the health effects of smoking "has been used to an advantage in marketing both the KENT and TRUE brands." The document stated: "Clearly the consumer is concerned about smoking and health, and is convinced in varying degrees that smoking is a possible detriment to his health. Presently, this factor is of active interest to R & D, since it has been used to an advantage in marketing both the KENT and TRUE brands." 80634635-4642 at 4639 (U.S. 21063).

2615. Lorillard was well aware in 1976 that consumers perceived its low tar brands as less harmful. A November 30, 1976 Lorillard memorandum from R.E. Smith to fellow Lorillard marketing executive J.R. Ave, with the subject heading "1976 Switching Study," stated:

I share MCA's overall conclusion that the Switching Study confirms the rightness of our 5 Year Plan; focussing [sic] Company effort against smokers' health concerns.... This view suggests sensible positionings for those Lorillard brands that directly address smokers' health concerns. (I believe these are totally compatible with ongoing work).

03918494-8495 at 8494 (U.S. 74777), 03296482-6544 at 6485 (U.S. 64511).

2616. Lorillard's "CONFIDENTIAL" 1976 "DOMESTIC CIGARETTE MARKETING 5 YEAR PLAN 1976-1980" stated:

Consumer preferences have shown a dramatic shift since World War II away from non-filter brands towards brands more responsive to the cigarette smoking and health controversy, and less harsh, filtered cigarettes, and, most recently, towards filtered brands offering low tar and nicotine.

The document further stated: "The most recent 6 year period has followed the traditional pattern in many essential characteristics ... 2) impressive gains by brands offering a perceived solution to health concerns." 03357128-7178 at 7137 (U.S. 85023); Orlosky WD, 65:10-19; 65:20-66:2.

2617. Lorillard's Five Year Plan for 1977-1981 stated: "The structure of the market is changing in the direction we forecast in 1976—toward brands responsive to the cigarette controversy." The plan further pointed out: "The success rate of new products ... is again on the uptrend with the emergence of products responsive to very specific and tightly focused concerns about the cigarette controversy."

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904100641-0706 at 0642, 0646 (U.S. 74853).

2618. A January 26, 1977 Lorillard memorandum from Dick Smith to J.R. Ave stated:

The Nowland Research strongly confirms the rightness of Lorillard's marketing concentration in the area of health concern. Smokers are extremely and increasingly health concerned. And these smokers are actively interested in better ways to lessen/eliminate this concern -while continuing to smoke. More specifically, our going projects are on target . . I suggest that both the Kent and TRUE Brand Groups

analyze the complete Nowland Report. Our established health concern brands should be able to develop specific strategic and executional actions from this rich, diagnostic research.

01244406-4408 (U.S. 74669); Orlowsky WD, 66:10-67:5.

2619. A June 14, 1978 Lorillard document stated:

"There is a major opportunity for a brand which can simultaneously satisfy smokers and address the concerns arising from the cigarette controversy. 1. Very low tar products—line extensions and independent brands—have been the fastest growing cigarette segment during the last two years which indicates that an ever increasing number of 'concerned' smokers are striving to go as low in tar as possible while still getting acceptable taste. There is no reason to believe that these smokers have found their ultimate reduced tar brand. More likely, they are prime candidates to move even lower over time. Comparing 1976 with 1977 sales, the ultra low tar segment grew 14% and is now accounting for a total of 24 billion units. We project that by 1981, the category will increase to 47 billion units, a growth of 96%."

00138232-8233 at 8232 (U.S. 74655) (emphasis in original).

2620. A January 31, 1980 Lorillard memorandum from Larry DuLude to fellow consumer researcher Gordon Flinn stated, under the heading "Consumer Attitudes toward Smoking": "Increasing interest in Low Tar . . . Increased number of health-concerned smokers." 01782312-2322 at 2313 (U.S. 74959).

2621. A Lorillard document circa 1984 reported that Laurence Tisch, who served on Lorillard's Board of Directors in 1969 and 1985, and who from 1959 was the Chairman of the Board of Loew's which merged with Lorillard in 1968, stated at a New York State Department of Insurance hearing:

Lorillard was the leader in the so-called health cigarettes, the low tar, the low nicotine cigarettes. They first introduced Kent with the micronite filter ten or fifteen years ago. It was a very successful entry because that was when the health scare first came into vogue. They followed that with the successful entry of True by Lorillard We feel that we make cigarettes that are healthier than other cigarettes - low in tar and nicotine.

91780361-0398 at 0362-0363, 0375, 0394 (U.S. 85024).

2622. A Lorillard document discussing its three-year plan for 1985-1987 stated, below the "Influence of Low Tar" heading: "More smokers will continue to see low tar brands as a way of dealing with the smoking controversy. Reduced Tar volume now represents 48% of the total industry, up from 37% in 1979." 80403362-3376 at 3362 (U.S. 55377).

2623. According to Stephen Jones, a Lorillard chemist who worked for Lorillard

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for more than twenty-eight years and participated in the design of almost all the Lorillard cigarette brands, including Newport, Kent Golden Lights, Kent III, Triumph, Maverick, Style, Old Gold, and Max, Lorillard's marketing plans sought to address what the company thought consumer preferences would be. Jones believed that consumers felt that there was a health advantage to smoking reduced tar or filtered cigarettes and that, by and large, smokers of all ultra low tar cigarettes, including Lorillard's True

brand, perceived such cigarettes to be more healthy. Jones PD, Reed v. Philip Morris, 4/22/97, 136:5-139:21; Jones PD, Reed, 4/27/97, 141:12-141:18; 143:12-143:15.

g. Liggett

2624. On September 5, 2001, Dr. Anthony Albino, Executive Vice President, Strategy, Communication and Consumer Contact at Vector Tobacco, Inc., sent an email to a number of recipients, including Bennett LeBow, Chairman of the Board and Chief Executive Officer of Vector Group, Ltd., and VGR Holding Inc., admitting that: "the adoption of 'light' cigarettes over the past 25 years was mainly due to the PERCEPTION of safety." VDOJ6743-6744 at 6743 (U.S. 64727) (emphasis in original); LeBow TT, 4/4/05, 17594:24-17596:17.

2625. Liggett sold its Chesterfield, Lark, and L & M brands to Philip Morris in 1998. The Liggett Group Inc. continues to market light cigarettes under its brands Class A, Eve, Jade, Liggett Select, Montego, Pyramid, and under a generic Private Label. Bennett LeBow admitted that his company continues to market light cigarettes under these brand names because Liggett could not cease marketing light cigarettes and remain in business. LeBow asserted that every cigarette manufacturer in the industry must continue to sell light cigarettes in order to survive. (no bates) (U.S. 93254); LeBow WD, 66:10-12; Le-Bow TT, 4/4/05, 17597:6-17598:16, 17600:4-17603:2.

6. Conclusions

2626. The evidence set forth above overwhelmingly establishes the following facts.

2627. It is clear, based on their internal research documents, reports, memoranda, and letters, that Defendants have known for decades that there is no clear health benefit from smoking low tar/low nicotine cigarettes as opposed to conventional full-flavor cigarettes. It is also clear that while Defendants knew that the FTC Method for measuring tar and nicotine accurately compared the nicotine/tar percentages of different cigarettes, they also knew that that Method was totally unreliable for measuring the actual nicotine and tar any real-life smoker would absorb because it did not take into account the phenomenon of smoker compensation. Defendants also knew that many smokers were concerned and anxious about the health effects of smoking, that a significant percentage of those smokers were willing to trade flavor for reassurance that their brands carried lower health risks, and that many smokers who were concerned and anxious about the health risks from smoking would rely on the health claims made for low tar cigarettes as a reason, or excuse, for not quitting smoking.

2628. Despite this knowledge, Defendants extensively—and successfully—marketed and promoted their low tar/light cigarettes as less harmful alternatives to fullflavor cigarettes. Moreover, Defendants opposed any changes in the FTC Method which would more accurately reflect the effects of compensation on the actual tar and nicotine received by smokers, denied that they were making any health claims for their low tar/light cigarettes, and claimed that their marketing for these cigarettes

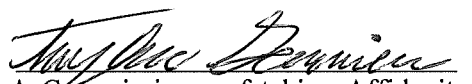
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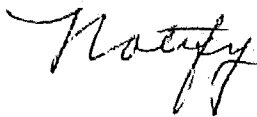
was based on smokers' preference for a "lighter," "cleaner" taste.

2629. By engaging in this deception, Defendants dramatically increased their sales of low tar/light cigarettes, assuaged the fears of smokers about the health risks of smoking, and sustained corporate

revenues in the face of mounting evidence about the health dangers of smoking. U.S. v. Philip Morris USA, Inc., 449 F.Supp.2d 1 (D. D.C., 2006)

This is Exhibit "L" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia



COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, ss.

SUPERIOR COURT
CIVIL ACTION
No. 98-6002-BLS1THOMAS GEANACOPOULOS¹, on behalf of a class

vs.

PHILIP MORRIS USA INC.

FINDINGS OF FACT AND CONCLUSIONS OF LAW AFTER TRIAL**INTRODUCTION**

Were purchasers of Marlboro Lights cigarettes during the class period of 1994 - 1998 deceived or misled by Philip Morris USA, Inc. with respect to whether Marlboro Lights were less harmful or safer than Marlboro regular cigarettes? If so, did the purchasers suffer a cognizable injury as a result of the deceitful conduct that may be compensated by damages? These are the two basic questions presented by this action filed in 1998 and litigated extensively over seventeen years, culminating in a five week trial before this court. What follows is a brief recitation of the litigation history and my findings of fact and conclusions of law after trial.

BACKGROUND

Plaintiffs filed their complaint on November 25, 1998, alleging that the conduct of Philip Morris with respect to the advertising, marketing, and sale of Marlboro Lights cigarettes was

¹ On October 4, 2013, the parties filed a stipulation of voluntary dismissal of the claim of Lori Aspinall. Accordingly, Geanacopoulos is the only named plaintiff and representative of the certified class. Because this case has a lengthy history with "Aspinall" as the first-named plaintiff, reference is made here to her name for consistency. The certified class will be referred to as "plaintiffs".

deceptive in violation of G.L. c. 93A (“c. 93A”), the Massachusetts consumer protection statute. Specifically, they claimed that Philip Morris engaged in practices prohibited by that statute “by misleading the public into believing that their product, Marlboro Lights, would deliver lower levels of tar and nicotine, when [the company] knew the truth to be otherwise and, in fact, intentionally designed the product so that most smokers of Marlboro Lights would receive as much, or more, tar and nicotine than if they had smoked regular cigarettes.” *Aspinall v. Philip Morris Co., Inc.*, 442 Mass. 381, 382 (2004)(*Aspinall I*). In 2001, a class consisting of purchasers of Marlboro Lights in Massachusetts during the four years preceding the filing of the complaint on November 25, 1998, was certified. That certification was affirmed by the Supreme Judicial Court in 2004. *Id.* at 402. Subsequently, in December 2005, the class definition was modified by a decision of this court (Lauriat, J.) to include “Massachusetts residents and residents of surrounding states [Connecticut, Maine, New Hampshire, New York, Rhode Island and Vermont] who regularly purchased Marlboro Lights in Massachusetts during the class period.” *Aspinall v. Philip Morris Cos., Inc.*, 2005 Mass. Super. LEXIS 629, 20 Mass. L. Rpt. 300 (Mass. Super. Ct. 2005). The court then approved notice to the class members. The certified class is seeking recovery for economic injuries, only; not for personal injuries.

The Supreme Judicial Court addressed this case again in 2009 when it held that plaintiffs’ claims were not preempted by Federal law precluding states from requiring additional warnings about smoking and health. The Court also held that plaintiffs’ claims were not barred by § 3 of c.93A prohibiting an action based on conduct permitted by Federal law. *Aspinall v. Philip Morris, Inc.*, 453 Mass. 431, 437 (2009)(*Aspinall II*).

In 2014, this court (Kaplan, J.) issued a decision regarding potential remedies available to

plaintiffs. *Aspinall v. Philip Morris Cos., Inc.*, 2014 Mass. Super. LEXIS 26, 32 Mass. L. Rpt. 75 (Mass. Super. Ct. 2014) (“*Aspinall - Remedies Decision*”). The court noted the Supreme Judicial Court’s approval in *Aspinall I* of the following measure of actual damages: The difference between the price paid by purchasers of Marlboro Lights and the true market value of the “misrepresented” cigarettes actually received.” *Aspinall I* at 399. Actual damages might possibly be doubled or trebled if the court finds that the use or employment of the unfair and deceptive acts was a willful or knowing violation of the statute. If plaintiffs are unable to prove actual damages, “they will be entitled to recover statutory damages under G.L. c. 93A, § 9 (3).” *Aspinall I* at 400. Justice Kaplan held that such statutory damages would be \$25 per class member, as opposed to \$25 for each purchase of Marlboro Lights. In addition, he held that plaintiffs could not recover an additional amount over actual damages or statutory damages for disgorgement of profits from Philip Morris.

In 2015, Philip Morris moved for summary judgment based on the argument that plaintiffs are not only unable to prove actual damages, but are also unable to prove any compensable injury cognizable under c. 93A. As a result, Philip Morris argued, plaintiffs may not recover even the statutory damages of \$25. In a decision dated August 10, 2015, this court, by the undersigned, denied the motion. *Aspinall v. Philip Morris USA, Inc.*, 2015 WL 9999126 (Mass. Super. Ct. 2015) (“*Aspinall - Summary Judgment Decision*”).

FINDINGS OF FACT AND CONCLUSIONS OF LAW AS TO LIABILITY

I. Undisputed Facts

The parties presented certain agreed upon or stipulated statements of fact that provide background for the dispute.

Philip Morris first manufactured and sold Marlboro Lights cigarettes in 1971. It marketed, distributed and sold Marlboro Lights to its direct customers for ultimate resale to consumers purchasing cigarettes in Massachusetts and throughout the United States from 1972 through June 2010. From the introduction of the product in 1971 until the first quarter of 2003, every pack of Marlboro Lights bore the descriptors "Lights" and "Lowered Tar & Nicotine."

In 1967, the Federal Trade Commission ("FTC") began measuring the tar and nicotine yield of cigarettes using a standardized test method known at various times as the "Cambridge Filter Method" or the "FTC Method." The FTC Method measured the tar and nicotine yields of cigarettes when "smoked" by a machine under standard protocols. From 1994 through 1998, Marlboro Lights and Marlboro regular cigarettes, known as "full-flavor" or "Marlboro Reds," showed the following tar and nicotine yields when measured according to the FTC method:

Year	Marlboro Reds Tar/Nicotine (mg. per cigarette)	Marlboro Lights Tar/Nicotine (mg. per cigarette)
1994	16/1.1	10/0.8
1995	16/1.1	11/0.8
1996	16/1.1	10/0.8
1997	16/1.1	11/0.8
1998	15/1.1	11/0.8

After the end of the class period, in October 1999, Philip Morris included on its website a statement that "Philip Morris does not imply in its marketing, and smokers should not assume, that lower-yielding brands are 'safe,' or are 'safer' than full-flavor brands." Beginning in late

2002 and continuing in at least one quarter every year through 2008, Philip Morris placed a three-fold insert – or pamphlet – on some packs of Marlboro Lights. The inserts were titled “Information for Smokers.” The inserts stated “You should not assume that cigarette brands using descriptors like ‘Ultra Light’, ‘Light’, ‘Medium’ or ‘Mild’ are less harmful than ‘full flavor’ cigarette brands or that smoking such cigarette brands will help you quit smoking.” In 2009 and 2010, Philip Morris used a tear tape on all “lights’ brands, including Marlboro Lights, that contained printed text informing consumers that “‘Lights’ does NOT mean safer.”

In the first quarter of 2003, Philip Morris removed “lowered tar and nicotine” as a descriptor from packages of Marlboro Lights, and in mid-2010, removed the “Lights” descriptor entirely. Since that time, Philip Morris continues to market and sell the cigarettes formerly known as Marlboro Lights as “Marlboro Gold”. Beginning in 2011, and continuing to today, every pack of Marlboro Gold has a tear tape that reads, “Nothing about this cigarette, packaging, or color should be interpreted to mean safer.”

II. Phillip Morris Represented Marlboro Lights To Be a Less Harmful or Safer Cigarette

In 1964, the U.S. Department of Health Education and Welfare issued a landmark report entitled “Smoking and Health: Report of the Advisory Committee of the Surgeon General of the Public Health Service.” The report affirmatively linked smoking with causing lung cancer and other adverse health consequences. In the aftermath of that report, and earlier published studies going back for decades regarding the adverse health effects of smoking, Philip Morris recognized the need, in order to preserve its business, to develop and market a “healthier” cigarette. For example, in a 1966 “special project” entitled “Market Potential of a Health Cigarette” the company noted that “[i]f we could develop a medically and governmentally endorsed ‘healthy’

cigarette that tasted exactly like a Marlboro, delivered the nicotine of a Marlboro, and was called a Marlboro, it would probably become the best selling brand.” This prescient statement predicted the development and release by Philip Morris of Marlboro Lights in 1971.

Plaintiffs presented the testimony of Dr. Robert Proctor, a professor of the history of science at Stanford University. Dr. Proctor holds a Ph.D. in the history of science from Harvard University. Dr. Proctor has specialized in the history of the cigarette industry in the United States, including the design and marketing of cigarettes. He has authored and published peer-reviewed articles and books relating to the marketing and sale of cigarettes. He was a senior scientific reviewer for the 2014 Surgeon General’s report on the health consequences of smoking. He has reviewed hundreds of thousand of documents produced by the tobacco industry including internal Philip Morris documents produced in litigation. Based on those documents and his review of the scientific literature, Dr. Proctor offered opinions regarding the state of scientific knowledge in the wake of the link between smoking and cancer publicized in the 1950s and in the 1964 Surgeon General’s report and the marketing strategy undertaken by Philip Morris. I find that Dr. Proctor’s testimony aided the court in understanding and interpreting the state of scientific knowledge at various times and the importance of documents presented from Philip Morris’ internal files. I find that he is well qualified and that his testimony was supported by the evidence.

Dr. Proctor’s testimony and the Philip Morris documents persuasively demonstrated that Marlboro Lights cigarettes were developed, designed and marketed by Philip Morris as a “health reassurance” product. Philip Morris was concerned about people quitting smoking as well as attracting new smokers in light of the “health scare.” Numerous Philip Morris documents reflect

the company's desire to develop a product for the health conscious marketplace. This motivation led to the creation of "Project Gold."

Project Gold was the code name for what became Marlboro Lights. James Morgan was the Philip Morris executive in charge of the project. He became the brand manager for Marlboro Lights and, later, the CEO of Philip Morris. Mr. Morgan testified by way of a videotaped deposition taken in 2002. Mr. Morgan admitted that Marlboro Lights were marketed to people seeking a low tar and nicotine cigarette, including those who might want to switch to low tar from a full flavor cigarette. He conceded that at least the "majority" of people seeking a low tar and nicotine cigarette were doing so because of health concerns. Philip Morris was aware that those people believed that low tar meant less harmful. Mr. Morgan also conceded that the descriptor "Lights" conveyed to consumers, and was perceived as meaning, lower tar and, thus, less harmful. Philip Morris' own research from as early as 1974, concluded that with respect to the lowered tar and nicotine descriptor on each pack of Marlboro Lights, "[t]he 'lowered' line clearly means less tar . . . and better for your health" Mr. Morgan acknowledged the company's awareness of that perception. He testified that the company did nothing to counter that perception.

Other Philip Morris executives whose testimony was offered by plaintiffs through depositions confirmed that the *raison d'être* of Marlboro Lights, and the aim of the continued marketing of the brand from 1971 through the class period, was to offer a cigarette perceived by smokers as less harmful than Marlboro Reds. Marlboro Lights was described as an "extension" of the Marlboro brand providing a similar flavor with the same aura projected by Marlboro Reds advertising. For example, in one advertisement Marlboro Lights was described as "the Spirit of

Marlboro in a low tar cigarette.” If there had not been a desire and plan by Philip Morris to market a “light” cigarette so as to capture the market of consumers seeking a less harmful cigarette, then Marlboro Lights would likely never have come into existence. In fact, the introduction of Marlboro Lights cut into the market share of Marlboro Reds. As health conscious behavior by consumers grew, Marlboro Lights became the leading cigarette brand in the United States (in terms of market share) by the time of the class period. As described by a former vice-chairman of Philip Morris (Ross R. Millheiser), the low tar cigarette was advertised and marketed because it was perceived to be safer, and consumers would purchase it because it would be better for them. This is exactly what Philip Morris was told by its survey experts. In a 1979 study to assess the low tar market, prepared for Philip Morris by The Roper Organization, the company was told “[t]he appeal of low tars is simple and single - - better for you, less harmful, easier on the lungs, throat, etc.”

Philip Morris’ intent and plan to market Marlboro Lights as a less harmful or safer cigarette is confirmed in its Strategic Plan for the period 1992-1996 (a time that includes a portion of the class period). In that document, there is a summary of the company’s knowledge and rationale for low tar and nicotine cigarettes: “An analysis of the cigarette market over the last 50 years suggests that there have been only two major influences on smokers buying patterns; namely, smokers seeking to address their perceived health concerns and smokers seeking price relief.” The document then confirms that the company’s development of the “low tar segment” was a change in design “driven by perceived health concerns.”

Dr. Proctor offered the opinion that Philip Morris’ plan was to convey “safety” with the descriptors “Lights” and “Lowered Tar & Nicotine” on each pack of Marlboro Lights. I agree

based upon the Philip Morris documents and the testimony of its executives. My finding is that Philip Morris, intentionally, knowingly and willfully, conveyed through the use of the descriptors for more than thirty years that Marlboro Lights cigarettes were less harmful, and therefore safer, than Marlboro Reds and other full flavor cigarettes.

III. The Representation by Philip Morris That Marlboro Lights Was Less Harmful or Safer Than Marlboro Reds Was Material To Purchasers' Decisions To Buy Marlboro Lights During the Class Period

The logical inference from the success of the Philip Morris strategy to develop and market Marlboro Lights is that the "less harmful" representation by the company was material to the decision to buy Marlboro Lights. If consumers were not motivated by the promise of a "less harmful" cigarette, it is reasonable to conclude that they would have continued to buy Marlboro Reds. Marlboro Lights would not have overtaken Marlboro Reds as the leading brand.

Whether the purchaser was originally a Marlboro Reds smoker, a smoker who was trying to quit by reducing his or her intake of nicotine, or a new smoker, his or her reasonable choice was to purchase a less harmful cigarette that delivered a similar taste and conveyed a similar image as Marlboro Reds. That is what Philip Morris expected and that is what the market research contracted for by Philip Morris confirmed, including research conducted during the class period. Based on the reported research, Dr. Proctor concluded that "a lot of people who might otherwise have quit" shifted to a cigarette they thought was safer because it was lower in tar and that "people bought the myth [that Marlboro Lights cigarettes were less harmful], acted on it, and Marlboro Lights becomes the best selling cigarette in the country as a result of these descriptors."

At trial, Philip Morris attempted to rebut the conclusion that the "less harmful" message was material to consumers' choices to buy Marlboro Lights by introducing into evidence various

articles, news reports and public service advertisements (the “reports”) going back to the 1930s, and increasing in intensity in the 1980s and 1990s. The gist of the reports was that cigarettes lower in tar and nicotine may not be better for you because the smoker will compensate; i.e., puff harder and longer, inhale deeper and smoke more cigarettes to obtain the level of tar and nicotine the smoker desires. Philip Morris offered this evidence, at least in part, to suggest that plaintiffs in the class period could not have bought Marlboro Lights on the premise that the cigarettes were less harmful.

This attempt at rebuttal is unpersuasive and counter-productive to Philip Morris.² Isolated reports in journals and magazines, and even news reports and public service announcements about the phenomenon of compensation, hardly overcomes the implied message of “less harmful” that was featured on every pack of Marlboro Lights. Dr. Proctor testified that the public health community and the public in general did not have sufficient information, including information from the files of Philip Morris, to understand the depth, and completeness, of compensation until 2001. According to Dr. Proctor, the “sales of Lights showed the continuing misunderstanding [of Marlboro Lights being less harmful].” Even Philip Morris’ CEO during most of the class period, Mr. Morgan, acknowledged that it was “very unlikely that consumers, or at least the vast majority of consumers” would know about the phenomena of compensation. I find that a reasonable, objective consumer would continue, throughout the class period, to view

² It is fair to conclude that Philip Morris, as the manufacturer, knew of the same published reports regarding the phenomenon of compensation completely mitigating the promise of lower tar and nicotine in Marlboro Lights. Yet, Philip Morris did not, throughout the class period, delete or modify or elucidate the implied message of “less harmful” provided by the descriptors on each and every pack of Marlboro Lights.

the health reassurance message conveyed on each pack of Marlboro Lights as a material factor in choosing to buy Marlboro Lights.

IV. Philip Morris Knew That Marlboro Lights Cigarettes Were Just As Harmful, If Not Potentially More Harmful, to Smokers Than Marlboro Reds

A. Philip Morris Knew That People Smoke To Get Nicotine and Compensate To Satisfy Their Need for Nicotine by Adapting Their Smoking Behavior

Philip Morris knew that nicotine is addictive. In contrast to its public denial of the addictive nature of nicotine, an internal document from 1963 acknowledged that “nicotine is addictive” and stated “we are, then, in the business of selling nicotine, an addictive drug effective in the release of stress mechanisms.” The company’s research confirmed that “the primary motivation for smoking is to obtain the pharmacological effect of nicotine.” A Philip Morris document from 1972 noted that the “psychological response to nicotine can readily be elicited by cigarettes delivering in the range of 1 mg. of nicotine” and that attempts to introduce low nicotine brands into the market were not successful in capturing a substantial segment of the market.

Dr. Peter Shields was called as an expert witness for plaintiffs. Dr. Shields is a medical doctor specializing in lung cancer research and treatment. He has concentrated his career on the connection between smoking and lung cancer, has published more than 200 articles in peer-reviewed journals and has been employed by, and then served as an advisor to, the National Cancer Institute. I find that Dr. Shields is a highly qualified expert witness whose testimony was credible and persuasive.

Dr. Shields explained that individual smokers, whether long-time smokers or new smokers, develop a “nicotine thermostat.” The thermostat measures their internal need to obtain the benefits of nicotine such as elevation of mood, relaxation, suppression of appetite, etc. A

smoker will smoke to obtain the level of nicotine necessary to obtain his or her satisfaction on the nicotine thermostat. The smoker will do so largely in a subconscious manner. If presented with a cigarette that does not deliver nicotine in an amount to satisfy the smoker's nicotine thermostat, the smoker subconsciously compensates by taking deeper puffs, holding the smoke longer, smoking the cigarette closer to the butt, or smoking more cigarettes. This behavior, known as compensation or titration, was well known to Philip Morris as evidenced by numerous documents in the company's files.

Philip Morris internal documents from the 1970s recognize that "smokers develop a daily nicotine quota for tar and nicotine" and will change "the duration and volume of their puffs" to reach the quota. "The smoker is going to get the amount of tar he wants regardless of how many he smokes and regardless of the tar delivery of the cigarette It may well be that the Marlboro smoker today gets as much from his cigarette as the Philip Morris non-filter smoker got 20 years ago by puffing and inhaling more efficiently so that a greater proportion of that made available to him is gotten over into his system."

It is on the basis of Philip Morris' knowledge of the addictive nature of nicotine and the phenomenon of smoker compensation that Philip Morris' design of Marlboro Lights must be evaluated.

B. Philip Morris Designed Marlboro Lights Knowing That The Design Allowed If Not Encouraged a Smoker To Obtain the Same Tar and Nicotine As Marlboro Reds

Dr. William Farone, a high-level Philip Morris employee from 1976 to 1984, testified for plaintiffs, both live and by deposition transcript. Dr. Farone was the Director of Applied Research at Philip Morris. He was involved in the design of Philip Morris cigarettes and, in that capacity,

attended weekly meetings with the top executives of the company. His testimony was credible and was buttressed by internal Philip Morris documents.

According to Dr. Farone, Philip Morris wanted to take competitive advantage of the health scare precipitated by the 1964 Surgeon General's report. He referenced the 1966 Philip Morris document entitled "Market Potential of a Health Cigarette," which stated that (1) a large proportion of smokers are concerned about the relationship of cigarette smoking to health; (2) mere reduction in nicotine and TPM [total particulate matter] delivery by conventional methods of filtration would not be a sufficient basis for launching a new cigarette, and to attempt it would be to court disaster; and (3) "the illusion of filtration is as important as the fact of filtration." Dr. Farone testified that the Marlboro Lights design was consistent with providing only the illusion of filtration.

Philip Morris developed a cigarette that would be perceived as less harmful or safer than its Marlboro Reds brand because of the design of the filter. Specifically, the principal difference between Marlboro Reds and Marlboro Lights was the design of the filter, with Marlboro Lights using tiny, virtually undetectable, ventilation holes in the filter. After 1978, when Marlboro Reds also began utilizing ventilation holes, the principal difference in design between Marlboro Lights and Marlboro Reds was that Marlboro Lights ventilation holes provided about ten percent more ventilation when measured on a smoking machine. According to Dr. Farone, Philip Morris knew that this relatively small difference in ventilation as measured on a smoking machine ensured that a smoker could and would receive the same amount of tar and nicotine from a Marlboro Lights cigarette as a Marlboro Reds cigarette because of the smoker's unconscious compensation methods.

Marlboro Lights was designed so that when the smoke yield of tar and nicotine was measured on a standardized smoking machine, the yield would be lower in tar and nicotine than the yield of Marlboro Reds. At the same time, Philip Morris knew that people do not smoke like the standardized smoking machine. Philip Morris' Director of Research (Dr. Wakeham) admitted in a 1974 document that "people do not smoke like a machine." In another internal Philip Morris memorandum it is stated flatly that the machine yield data are "erroneous and misleading" as to the actual receipt of tar and nicotine by the smoker.

Dr. Farone's testimony regarding the design of Marlboro Lights was unrebutted. He testified that there are more than fifty design features of a cigarette that can affect the amount of the delivery of tar and nicotine. Philip Morris wanted Marlboro Lights to taste like Marlboro Reds (taste is a function of the amount of tar delivered) and to deliver nicotine that would satisfy a smoker like a Marlboro Reds would. Thus, Philip Morris elected to design Marlboro Lights so the cigarette would deliver lower yields of tar and nicotine on the smoking machine but would allow a smoker easily to obtain the same yield of tar and nicotine as Marlboro Reds. While it was possible, according to Dr. Farone, to design a cigarette with sufficient filtration or ventilation to make it impossible for a smoker, by use of compensation methods, to draw equivalent levels of tar and nicotine as from Marlboro Reds, Philip Morris designed Marlboro Lights to deliver a small reduction in tar and nicotine as measured by the machine in order to ensure the smoker could easily overcome the reduction and be satisfied by the taste of the cigarette and the intake of nicotine as if he smoked Marlboro Reds. As testified to by Dr. Farone, Marlboro Lights cigarettes were designed to give the smoker the "opportunity with a slight increase in puff to obtain the same amount of nicotine that one obtained from a Marlboro Red." Also, the ventilation holes in the

filter made it easy for a smoker to compensate by simply covering the holes with his fingers or lips. Philip Morris knew that such behavior by a smoker would mitigate any alleged lower delivery of tar and nicotine. Dr. Farone, who was involved with the decision about where to place the ventilation holes, denied that Philip Morris intended to place the holes strategically to *ensure* the smoker would cover them by lips or fingers. The choice of using ventilation holes, as opposed to other methods of filtration, was made, however, knowing that smokers would consciously or unconsciously, block the ventilation by covering the holes.

In sum, based upon Dr. Farone's testimony and the documents from the internal files of Philip Morris, I find that Philip Morris knew that the difference in design between Marlboro Lights and Marlboro Reds would not result in the delivery of lower tar and nicotine to a human smoker, as opposed to a smoking machine. As Dr. Farone testified, he and the other executives at Philip Morris with whom he interacted were fully aware that the design difference between the two brands was not enough "to make any significant - - statistically significant or meaningful difference in the amount of tar and nicotine that a person actually [received] from those two cigarettes." Nevertheless, Philip Morris continued to market and advertise Marlboro Lights as "Lowered Tar & Nicotine" without disclosing or explaining that such a claim was meaningless as it related to how a human actually smokes the cigarette.

C. By the Start of the Class Period, Philip Morris Was Aware of Scientific Evidence Showing That There Was No Statistically Significant Difference Between the Amount of Tar and Nicotine Received By Smokers of Marlboro Lights As Compared To Marlboro Reds

Dr. Shields testified regarding the internal studies at Philip Morris and the state of scientific literature available to Philip Morris prior to and throughout the class period. The

scientific evidence consistently demonstrated, and supported Dr. Shields' opinion, that smokers did not receive a statistically significant reduction in tar and nicotine from Marlboro Lights as opposed to Marlboro Reds. I accept Dr. Shields' testimony as credible and persuasive.

In the 1970s, Philip Morris developed a Human Simulator Program to test whether human smokers actually received less tar and nicotine from a "light" cigarette. According to Dr. Shields, more than twenty studies were conducted by Philip Morris before 1983. In a 1975 study specifically comparing the tar and nicotine delivered by Marlboro Lights and Marlboro Reds, the Philip Morris researchers found that Marlboro Reds "smokers in this study did not achieve any reduction in smoke intake by smoking a cigarette (Marlboro Lights) normally considered lower in delivery." Dr. Shields testified that other studies performed by Philip Morris produced similar and consistent conclusions. Philip Morris' contention at trial that the 1978 design changes to Marlboro Lights and Marlboro Reds might make the early 1970s studies irrelevant was rejected, persuasively, by Dr. Shields. The post-1978 design of the two cigarettes presented the same results because the primary difference between the two cigarettes was and is ventilation. Philip Morris did not offer any credible rebuttal to this testimony.

In 1983, a paper appeared in the New England Journal of Medicine by a Dr. Benowitz. Dr. Shields testified that the publication of this article created a "big splash" in the scientific community and in the news directed to the general public. According to Dr. Shields, the Benowitz article provided clear notice to Philip Morris that smokers of lower tar cigarettes were not getting lower exposure to tar and nicotine.

It was Dr. Shields opinion, based upon the scientific literature, Philip Morris documents and his professional background, that because the design of Marlboro Lights and Marlboro Reds

was so similar, there would be one hundred percent compensation among the vast majority of smokers of Marlboro Lights to obtain the same intake of tar and nicotine as from Marlboro Reds. As a result, Marlboro Lights was not a lower risk tobacco product and Philip Morris knew it.

Considerable time was spent at trial analyzing published scientific studies addressing whether light cigarettes deliver lower tar and nicotine to the smoker under various assumptions and protocols. The studies discussed included ones done before and after the class period, including two principal ones carried out by Philip Morris long after the class period. Dr. Shields testified that all of the studies consistently support his opinion that, as between Marlboro Lights and Marlboro Reds, there is no statistically significant difference in exposure to tar and nicotine to the smokers of the two brands. In contrast, an expert called by Philip Morris, Dr. Peter Valberg, opined that the studies done after the class period demonstrated that smokers of Marlboro Lights actually received lower tar and nicotine. Dr. Valberg's analysis of the data provided by the published studies was shown to be inconsistent and contrary to the consensus of the scientific community. Dr. Valberg's analysis has never been published or subjected to peer review. I find that the testimony of Dr. Shields was far more persuasive and credible than the testimony of Dr. Valberg.

Finally, plaintiffs called as an expert witness, Dr. David M. Burns. Dr. Burns, a medical doctor, served as the senior scientific editor of Monograph 13 published by the National Cancer Institute in 2001. Monograph 13 is entitled "Risks Associated With Smoking Cigarettes With Low Machine-Measured Yields of Tar and Nicotine." Dr. Burns testified that the conclusions stated in Monograph 13 were subject to extensive peer review and represented the consensus of the scientific and public health communities. In Monograph 13, the National Cancer Institute

concluded as follows:

The combination of these two phenomena - - compensation on the part of the smoker and elasticity of delivery in the cigarette - - meant that most, perhaps nearly all, smokers who switched to these low-yield brands did not substantially alter their exposure to tar and nicotine and, correspondingly, did not lower their risk.

Monograph 13 at p. 3. Further, the Monograph reported that “[c]onsidering the overall exposure data for individuals selecting their own brands, there is little reason to expect that smokers of low-yield cigarettes will have a lower risk of disease than those who smoke higher yield cigarettes.”

Monograph 13 at p. 60. Dr. Burns expressed the same opinions in his testimony and I find that his opinions are persuasive.

D. Philip Morris Did Not Substantiate the Representation That Marlboro Lights Are Less Harmful or Safer

For approximately twenty-three years leading up to the start of the class period in this action (1994), Philip Morris advertised and sold Marlboro Lights as a cigarette that was less harmful or safer than Marlboro Reds. Yet when Michael Szymanczyk, the CEO of Philip Morris in 1997, was asked in a deposition taken on February 11, 2003, whether there was any basis for that representation he readily conceded that “it has not been proven that Lights are safer.” Other Philip Morris executives echoed the lack of any scientific foundation for the health reassurance message conveyed by the descriptors on each pack of Marlboro Lights. Dr. A.C. Lilly, the Vice-President of Technology at Philip Morris, testified in a deposition on July 31, 2001, as the Philip Morris designee on the design of Marlboro Lights. He admitted that he never saw any scientific evidence to support a statement that Marlboro Lights were safer than Marlboro Reds. Dr. Jerry Whidby, the highest ranking scientist within Philip Morris in 1998, testified in a deposition on May 21, 2002, that Philip Morris conducted no biological testing of the finished products,

Marlboro Lights and Marlboro Reds, so as to compare any differences. The company, thus, had no way to compare the two brands with respect to smokers' biological results from inhaling the smoke.

In 2008, ten years after the close of the class period, Philip Morris published a study entitled "A Randomized, Controlled Exposure Study in Adult Smokers of Full Flavor Marlboro Cigarettes Switching to Marlboro Lights or Marlboro Ultra Lights Cigarettes." In this paper, Philip Morris admitted that "to date no state-of-the-art clinical study has been conducted to address the question as to whether switching to lower tar cigarettes reduces exposure to smoke constituents in humans."³ No explanation was offered by Philip Morris as to why, as a manufacturer of a product to be sold to the public, it had not conducted this study at an earlier time to justify its implicit "less harmful" message communicated for the entire time Marlboro Lights cigarettes were on the market.

I find that Philip Morris, for more than twenty-eight years until 1999, knowingly and willfully marketed Marlboro Lights as a cigarette less harmful or safer than Marlboro Reds without sufficient evidence to substantiate that claim. This was, in essence, acknowledged by Philip Morris when in 1999, Philip Morris stated on its website, for the first time, that consumers should not assume that lowered tar and nicotine cigarettes are safer than full flavor brands. Finally, in 2003, Philip Morris removed the "Lowered Tar & Nicotine" descriptor from the package of Marlboro Lights, and in 2010, removed the "Lights" descriptor entirely. Philip Morris did not explain at trial what it learned in 1999 and 2003 that was different from what it knew

³ Dr. Shields testified that the data in this study supported his opinion that there is no statistically significant difference in exposure to nicotine in Marlboro Lights smokers versus Marlboro Reds smokers.

throughout the class period.

In 2014, the Surgeon General of the United States issued a report entitled “The Health Consequences of Smoking - 50 Years of Progress.” Among the findings in that report are the following regarding ventilated filters such as those on Marlboro Lights:

The evidence is sufficient to conclude that the increased risk of adenocarcinoma of the lung in smokers results from changes in the design and composition of cigarettes since the 1950s The evidence is not sufficient to specify which design changes are responsible for the increased risk of adenocarcinoma, but there is suggestive evidence that ventilated filters and increased levels of tobacco-specific nitrosamines have played a role.

Plaintiffs’ expert witnesses, Dr. Shields and Dr. David Burns, testified that the above statement in the 2014 Surgeon General’s report constitutes the consensus view of the scientific community. Each witness testified that, in his opinion, applying a “more likely than not” evidentiary standard, Marlboro Lights are, in fact, more harmful to smokers than Marlboro Reds because of the data suggesting increased adenocarcinoma in smokers of highly ventilated cigarettes. The witnesses explained that the increased ventilation of Marlboro Lights causes tobacco to burn more slowly which results in the delivery of more tobacco specific nitrosamines to the smoker than a lesser ventilated cigarette. The tobacco specific nitrosamines are mutagenic; i.e., they cause mutations in the cells of smokers. Some of those mutations may become carcinogenic. Specifically, the mutagens can cause cancer, particularly lung cancer of the adenocarcinoma variety. According to Dr. Shields, the 2014 Surgeon General’s report is based upon more than forty years of scientific research on the subject of mutagenicity.

Philip Morris contests the conclusion that Marlboro Lights are more dangerous than Marlboro Reds. It argues that the 2014 Surgeon General’s report (1) does not represent a

consensus of the scientific community, (2) does not support the “more likely than not” opinion of plaintiffs’ experts, and (3) there is insufficient evidence to support the conclusion of increased mutagenicity from highly ventilated cigarettes.

For purposes of this case, it is unnecessary to reach a conclusion as to whether Marlboro Lights cigarettes are more dangerous than Marlboro Reds. It is enough to find, as I do, that for decades a substantial scientific question was raised in the scientific and public health communities, and was known to Philip Morris, concerning the use of ventilated filters causing the smoke to be more mutagenic. Dr. Shields testified, with reference to numerous documents from the files of Philip Morris, that Philip Morris was aware from *in vitro* testing and other studies that cigarettes with increased ventilation, like Marlboro Lights, appeared to be higher in specific mutagenicity than those with lesser ventilation, like Marlboro Reds. According to Dr. Shields, the results of those studies regarding increased mutagenicity should have been a “red flag” to Philip Morris to conduct further research. Yet Philip Morris not only failed prior to the class period to conduct sufficient biological research or to conduct epidemiological studies to determine whether the increase in specific mutagenicity made Marlboro Lights more dangerous, but also continued to market and advertise Marlboro Lights as a less harmful or safer cigarette than Marlboro Reds without evidentiary substantiation of that claim. Moreover, every purchaser of Marlboro Lights was deprived of material information when they purchased a pack of cigarettes regarding the potential effect of Marlboro Lights being more mutagenic than Marlboro Reds.

V. Philip Morris Deceived And Misled Consumers During the Class Period In Violation of c. 93A

A. The Continued Use In the Class Period By Philip Morris of the Descriptors On Each Pack of Marlboro Lights Was Deceptive And Misleading In Violation of c. 93A

The Massachusetts consumer protection statute, c. 93A, § 2(a), provides that “[u]nfair methods of competition and unfair or deceptive acts or practices in the conduct of any trade or commerce are hereby declared unlawful.”⁴ A party alleging a violation of c. 93A must establish (1) an unfair or deceptive act or practice under c. 93A, § 2, (2) an injury, and (3) a causal connection between the injury and the defendant’s unfair or deceptive act. *Hershenow v. Enterprise Rent-A-Car Co. of Boston, Inc.*, 445 Mass. 790, 797 (2006). “A successful G.L. c. 93A action based on deceptive acts or practices does not require proof that a plaintiff relied on the representation . . . or that the defendant intended to deceive the plaintiff . . . or even knowledge on the part of the defendant that the representation was false.” *Aspinall I* at 394.

A practice is “deceptive,” for purposes of c. 93A, if the conduct could reasonably be found to have caused a person to act differently from the way he or she otherwise would have acted. *Id.* (noting that “whether conduct is deceptive is initially a question of fact, to be answered on an objective basis . . .”). Moreover, conduct is deceptive if it has “a tendency to deceive.” *Id.* “In determining whether an act or practice is deceptive, ‘regard must be had, not to fine spun distinctions and arguments that may be made in excuse, but to the effect which [the act or practice] might reasonably be expected to have upon the general public.’” *Leardi v. Brown*, 394 Mass. 151, 156 (1985), quoting *P. Lorillard Co. v. Federal Trade Comm’n*, 186 F.2d 52, 58 (4th

⁴ See c. 93A, § 1(b) (defining “trade” and “commerce” as, “the advertising, the offering for sale, . . . the sale, rent, lease or distribution of any services and any property, tangible or intangible, real, personal or mixed . . . and any other article, commodity, or thing of value wherever situate, and shall include any trade or commerce directly or indirectly affecting the people of this commonwealth”).

Cir. 1950).

The Supreme Judicial Court previously addressed legal standards specifically relating to false advertising and c. 93A that are applicable to the instant case. See *Aspinall I* at 394-398 (noting that “[i]f, as alleged, the defendants intentionally labeled their cigarettes ‘Lights’ with ‘lowered tar and nicotine’ in order to establish in the individual and collective consumer consciousness the concept that Marlboro Lights are more healthful (or, at least, less unhealthful) to smoke than regular cigarettes, and thereby increase the defendants’ market share of cigarette sales, with full knowledge that most Marlboro Lights smokers would not in fact receive the promised benefits of ‘lowered tar and nicotine,’ then there can be no question that the sales of Marlboro Lights occurred in circumstances that make the sales deceptive under G.L. c. 93A”). Under Massachusetts law, “advertising need not be totally false in order to be deemed deceptive in the context of G.L. c. 93A.” *Aspinall I* at 394. “The criticized advertising may consist of a half truth, or even may be true as a literal matter, but still create an over-all misleading impression through failure to disclose material information.” *Aspinall I* at 395, citing *Urman v. South Boston Sav. Bank*, 424 Mass. 165, 168 (1997); *Underwood v. Risman*, 414 Mass. 96, 99-100 (1993); *Greenery Rehabilitation Group, Inc. v. Antaramian*, 36 Mass. App. Ct. 73, 78 (1994) (“One can violate § 2 of G.L. c. 93A . . . by failing to disclose to a buyer a fact that might have influenced the buyer to refrain from the purchase”). In essence, “an advertisement is deceptive when it has the capacity to mislead consumers, acting reasonably under the circumstances, to act differently from the way they otherwise would have acted (i.e., to entice a reasonable consumer to purchase the product).” *Aspinall I* at 396. See *Bellermann v. Fitchburg Gas & Electric Light Co.*, 470 Mass. 43, 54 n.10 (2014) (“Where a defendant’s unfair or deceptive conduct causes customers to receive

a product or service worth less than the one for which the customers paid, the customers may pursue a class action under G.L. c. 93A to recover the amount by which they overpaid”).

In addition, the Massachusetts Attorney General has promulgated interpretive regulations pursuant to c. 93A, § 2(c) that are applicable to this court’s determination of whether Philip Morris violated c. 93A. *Purity Supreme, Inc. v. Attorney Gen.*, 380 Mass. 762, 769-771 (1980) (recognizing that regulations authorized by G.L. c. 93A, § 2(c) have the force of law, and “set standards the violations of which . . . constitute violations of c. 93A”).

Title 940 Code Mass. Regs. § 6.04(1) provides: “It is an unfair or deceptive act for a seller to make any material representation of fact in an advertisement⁵ if the seller knows or should know that the material representation is false or misleading or has the tendency or capacity to be misleading, or if the seller does not have sufficient information upon which a reasonable belief in the truth of the material representation could be based.” Specifically, a seller must be able to substantiate material representations about the product, as required by § 6.03(1) of the regulations (“The responsibility for truthful and nondeceptive advertising rests with the seller. Sellers must be able to substantiate material representations made before such representations are disseminated.”)

Furthermore, 940 Code Mass. Regs. § 3.05(1) states: “No claim or representation shall be made by any means concerning a product which directly, or by implication, or by failure to

⁵ Under 940 Code Mass. Regs. § 6.01, an “advertisement” is defined as: “[A]ny oral, written, graphic, or pictorial representation made by a seller in the course of the solicitation of retail business or which encourages a person to purchase a retail product. Advertisement includes a: representation made in a newspaper, magazine, on or via the Internet or other publication or on radio or television or contained in any notice, handbill, sign, billboard, banner, poster, display, circular, pamphlet, catalog, or letter, or printed on or contained in any tag or label which is attached to or accompanies any product offered for sale. Advertisement includes any representation disseminated within Massachusetts if the advertisement is directed to consumers in Massachusetts, or accessible to Massachusetts consumers on or via the Internet.”

adequately disclose additional relevant information, has the capacity or tendency or effect of deceiving buyers or prospective buyers in any material respect.” This prohibition includes, but is not limited to, representations or claims relating to the safety of a product. As mandated by 940 Code Mass. Regs. § 3.16(2), if “[a]ny person or other legal entity subject to this act fails to disclose to a buyer or prospective buyer any fact, the disclosure of which may have influenced the buyer or prospective buyer not to enter into the transaction” there has been a violation of c. 93A.

Whether the labeling and advertising of Marlboro Lights by Philip Morris was deceptive or misleading “is initially a question of fact, to be answered on an objective basis and not by the subjective measure argued by the defendants.” *Aspinall I* at 394. Thus, I evaluate whether the use by Philip Morris of the descriptors on each pack of Marlboro Lights had the tendency or capacity to deceive a consumer as to whether Marlboro Lights were less harmful or safer than Marlboro Reds and whether a reasonable consumer of cigarettes in Massachusetts during the class period could have been deceived or misled by the Marlboro Lights package, distinguishing itself from Marlboro Reds by touting “Lowered Tar & Nicotine” and “Lights.”

Applying these legal standards to the findings of fact described above, I find that plaintiffs have proven unlawful conduct by Philip Morris. Philip Morris knew that the implicit health reassurance message (Marlboro Lights are less harmful or safer than Marlboro Reds) conveyed by the descriptors “Lowered Tar & Nicotine” and “Lights” was not justified. The company did not conduct scientific research in the period of time through the class period to substantiate the implicit claim of “less harmful” or “safer” than Marlboro Reds. Moreover, the company knew that the representation of lowered tar and nicotine was not true for the vast majority of smokers because smokers become addicted to nicotine and compensate in their smoking methods to obtain

a level of tar and nicotine that will be the same or greater than a full flavor cigarette like Marlboro Reds. In fact, the company designed Marlboro Lights to be so close to the design of Marlboro Reds (including the quantity of nicotine delivered) that a modicum of compensation could easily overcome the design of Marlboro Lights that produced lowered tar and nicotine yields on the smoking machine. Despite this knowledge, Philip Morris, nevertheless, elected not to inform consumers of the material facts regarding the phenomenon of compensation until 1999 and later.

Moreover, as described above at pp. 9-10, I find that the health reassurance message conveyed on Marlboro Lights packages was material to the decision of a reasonable consumer to buy the product. Plaintiffs were not required to prove reliance on the misrepresentations by any particular class member or account for the potential variations among individual class members in the manner in which they might have weighed the health reassurance message. Instead, I find that the implied misrepresentation of “less harmful” and “safer” may “reasonably be expected” to deceive “the general public.” *Aspinall I* at 394. It is “self-evident” that a representation regarding the health and safety of a product is material to the reasonable consumer’s decision to purchase. *Commonwealth v. AmCan Enterprises, Inc.*, 47 Mass. App. Ct. 330, 336 (1999)(recognizing that court may make such a determination as a matter of law). See also, *In the Matter of Novartis Corp.*, 127 F.T.C. 580, 686 (1999), *aff’d* 223 F. 3d 783, 787 (D.C. Cir. 2000)(“Certain categories of information are presumptively material, including, but not limited to, express claims, claims significantly involving health or safety, and claims pertaining to the central characteristic of the product.”). “Neither an individual’s smoking habits nor his or her subjective motivation in purchasing Marlboro Lights bears on the issue whether the advertising was deceptive.” *Aspinall I* at 397.

Finally, I find that the use by Philip Morris of the descriptors was known by Philip Morris to be a deceptive and false health reassurance message and yet was willfully continued by Philip Morris as a deceptive practice throughout the class period. The deception was both because of what the descriptors explicitly stated and because of Philip Morris' failure to explain or qualify the health reassurance message. In addition, the deception was perpetrated by conveying a health reassurance message when the company did not have evidence to substantiate that claim.

B. The Plaintiff Class Was Injured As a Result of the Deceptive Conduct of Philip Morris

A plaintiff prosecuting an action for damages under c. 93A must prove that he or she "has, as a result, suffered a distinct injury or harm that arises from the claimed unfair or deceptive act itself." *Tyler v. Michaels Stores, Inc.*, 464 Mass. 492, 503 (2013). In other words, "the violation of the legal right that has created the unfair or deceptive act or practice must cause the consumer some kind of separate, identifiable harm arising from the violation itself." *Id.*

Philip Morris moved for summary judgment immediately before trial arguing that plaintiffs would be unable to prove the requisite "injury" to allow recovery under c. 93A. Philip Morris contended that the injury requirement had been refined by the Supreme Judicial Court since *Aspinall I* such that plaintiffs claims are now precluded. Philip Morris advances the argument even though the Supreme Judicial Court held in *Aspinall I* that if deceptive advertising is proved "a per se injury on consumers who purchased the cigarettes represented to be lower in tar and nicotine" has occurred. *Aspinall I* at 402. The Court went further to say that "all will be entitled to statutory damages, without regard to whether the plaintiffs are successful in establishing that consumers were overcharged for the deceptively advertised cigarettes." *Id.*

I denied Philip Morris' motion for summary judgment in a decision dated August 10, 2015. *Aspinall - Summary Judgment Decision*, 2015 WL 9999126 at *4. I noted the decision of the Court in *Bellermann, supra*, among other cases. Citing *Aspinall* as good authority, the Court in *Bellermann* stated “[w]here a defendant’s unfair or deceptive conduct causes customers to receive a product or service worth less than the one for which the customers paid, the customers may pursue a class action under G.L. c. 93A to recover the amount by which they overpaid.” *Bellermann*, 470 Mass. at 54, n.10. *Bellermann* also cited as good authority *Iannacchino v. Ford Motor Co.*, 451 Mass. 623, 630 (2008) where the Court rejected an argument that *Hershenow, supra*, barred recovery under c. 93A. A claim by plaintiffs in *Iannacchino* that the cars they purchased were less safe than was represented or required by safety standards “would support a cause of action under G.L. c. 93A, § 9.” *Iannacchino*, 451 Mass. at 630.

I concluded that if plaintiffs could prove that the Marlboro Lights cigarettes sold to the plaintiff class were less safe than represented to purchasers, plaintiffs would have suffered a separate, identifiable harm arising directly from the deceptive acts of Philip Morris. That is because a less safe cigarette is inherently lower in value than a safe cigarette. Regardless of the price set by Philip Morris for Marlboro Lights and Marlboro Reds, “[l]ogic . . . suggests that all other things being equal, a truly low tar and nicotine cigarette would have economic worth greater than a comparable regular cigarette, due to the added value of an inherently ‘safer’ cigarette.” *Aspinall I* at 400. As stated in my decision on summary judgment, “[a] claim that the product purchased was less safe than the product advertised is exactly what is asserted by plaintiffs here. If proved, plaintiffs have suffered a separate, identifiable harm arising directly from the alleged unfair or deceptive acts. That the less safe product actually received has a true market value less

than the product as advertised is a reasonable inference.” *Aspinall - Summary Judgment Decision*, *supra* at *4.

I find that the Marlboro Lights cigarettes sold during the class period were less safe to the smoker than the Marlboro Lights reasonable purchasers thought they were purchasing. I find that a diminution in value is a common sense inference.⁶ If a consumer were offered two products: (1) Marlboro Lights represented to be less harmful and safer than Marlboro Reds, and (2) Marlboro Lights represented to be just as harmful or potentially more harmful than Marlboro Reds, the consumer would buy the second product only at a reduced price, thereby reflecting its true market value.⁷ This reasonable inference is not affected by the fact that Philip Morris sold Marlboro Lights and Marlboro Reds at the same price.⁸ The appropriate measure is the difference between

⁶ The amount of the reduced market value must be proved by plaintiffs to a reasonable certainty in order to recover actual damages. *Aspinall I* at 399. Plaintiffs’ proof will be addressed in the next section. The reduced market value may reasonably be inferred, however, to be “harm worth more than a penny” and, thus, is sufficient to establish compensable injury. *Tyler*, 464 Mass. at 504 n.20 (2013)(allowing recovery of statutory damages).

⁷ Dr. Kevin M. Murphy, an expert economist called by Philip Morris, agreed that “the maximum amount [the consumer] would be willing to pay, whether he has to pay it or not, probably would be affected in some way” by learning that Marlboro Lights were just as harmful as Marlboro Reds.

⁸ The fact that the price of Marlboro Lights never differed from the price of Marlboro Reds even after (1) the publication of Monograph 13 by the National Cancer Institute in 2001 (reflecting a scientific consensus that low tar and nicotine cigarettes are designed to allow compensatory smoking behaviors, offsetting much of the theoretical benefit of a reduced-yield cigarette) and (2) the disclosure by Philip Morris on its website and in inserts that Marlboro Lights are not “less harmful”, is unpersuasive to show that the Marlboro Lights with full disclosure had a true market value the same as the actual Marlboro Lights sold in the class period. Philip Morris’ focus on calculations of price, alone is misleading. Philip Morris’ expert, Dr. Murphy, admitted that the price of Marlboro Lights had never been set by competitive forces of supply and demand. The price was set by Philip Morris for strategic reasons having to do with competition among sellers in a highly concentrated oligopoly. In addition, Dr. Murphy agreed that at the time Monograph 13 was published, Marlboro Lights were being sold at the minimum

the two versions of Marlboro Lights, not any potential difference between the market value of Marlboro Lights versus Marlboro Reds. See *Aspinall I* at 399-400. In addition, the reasonable inference of a diminished value of fully disclosed Marlboro Lights is not affected by individual characteristics among class members. Regardless of a class member's subjective understanding of the Philip Morris health reassurance message or, whether because of his or her individual smoking behavior he or she received lowered tar and nicotine, the class member paid more for Marlboro Lights than what he or she would have paid in a true market if the relative health risks of Marlboro Lights had been fully disclosed.⁹ Consequently, all members of the class suffered a similar injury - - they purchased a product that had less true market value than what was represented. Accordingly, I find that plaintiffs, as a class, suffered a similar injury that is compensable under c. 93A. As a result, Philip Morris' post-trial Motion to Decertify the Class (Paper # 210) will be denied.

FINDINGS OF FACT AND CONCLUSIONS OF LAW AS TO DAMAGES

In *Aspinall I*, the Supreme Judicial Court approved the following measure of actual damages in this case:

price allowed under Massachusetts law so the price could not have been less as a result of full disclosure of risk. Moreover, Dr. Harris, plaintiffs' expert economist, testified that, in fact, Marlboro Lights market share from 1990 to 2001 was on an upward curve but after 2001 -2002 the market share leveled off and, by 2008, began to decline. The decrease in market share of Marlboro Lights, after disclosure, logically suggests that the price set by Philip Morris for the post-disclosure Marlboro Lights was too high.

⁹ For example, a purchaser of dandruff shampoo may not be interested in dandruff prevention at all. He may simply like the texture of the anti-dandruff shampoo. The purchaser is, nevertheless, injured for purposes of damages under c. 93A by a false representation that the product is an anti-dandruff shampoo if he paid more for the product than he would have if the product had been sold as a regular shampoo with no anti-dandruff characteristic.

The plaintiffs expect to offer proof at trial that the amount all purchasers of Marlboro Lights paid for the cigarettes exceeded their true market value (what purchasers would have paid had they known the truth). If they succeed in their proof, the plaintiffs argue that the correct model for measuring actual damages is the difference between the price paid by the consumers and the true market value of the "misrepresent[ed]" cigarettes they actually received. (Thus, the exact amount of actual damages may be determined by multiplying the number of cigarettes sold, in the years defined by the certification order, by the difference between the price paid and actual fair market value.) This is a variation of the traditional "benefit of the bargain" rule that awards a defrauded party the monetary difference between the actual value of the product at the time of the purchase and what its value would have been if the misrepresentations had been true. We agree that the "benefit of the bargain" damages, if proved with reasonable certainty, would be appropriate in this case.

Aspinall I at 399. This measure of damages requires in the circumstances of this case that plaintiffs prove the true market value of a hypothetical product during the class period; namely, a Marlboro Lights cigarette that was sold and marketed as a product just as harmful as Marlboro Reds, and perhaps even potentially more harmful than Marlboro Reds. For purposes of clarity in discussing the measurement of damages, the Marlboro Lights as sold by Philip Morris during the class period (the cigarettes sold as less harmful or safer than Marlboro Reds) will be called Product 1. The hypothetical version of Marlboro Lights (the cigarettes with full disclosure as just as harmful or perhaps more harmful than Marlboro Reds) will be called Product 2. Plaintiffs' burden is to prove the difference in true market value between Product 1 and Product 2.

1. Proof of Actual Damages

Plaintiffs attempted to meet their burden of proof through the testimony of two expert witnesses: Dr. Michael Dennis and Dr. Jeffrey E. Harris. Both witnesses hold doctorate degrees (political science and economics, respectively) and have published extensively in peer reviewed journals. Dr. Dennis has more than twenty years of experience in the field of survey research. Dr.

Harris, who also holds a doctor of medicine degree, is a professor in the economics department at MIT and teaches both economics and statistics. By virtue of their education, background and experience, I find that both witnesses are qualified to give the opinions they provided in this litigation.

Based on the results of a nationwide survey conducted by Dr. Dennis in November 2002, Dr. Harris opined on the difference in true market value between Product 1 and Product 2. Dr. Harris performed calculations using a contingent valuation methodology. The methodology attempts to measure a consumer's willingness to pay for the hypothetical Product 2. That willingness to pay is calculated as a percentage discount from the price actually paid for Product 1. Dr. Harris opined that consumers would value Product 2 at 22.3% of the Product 1 price if Product 2 were disclosed as "just as harmful" as Marlboro Reds. Consumers would value Product 2 at 7.7 % of the Product 1 price if Product 2 were disclosed as "could be more harmful" than Marlboro Reds. Dr. Harris then calculated the amount overpaid by the class members as the discount between what the consumers paid and what they would have paid had full disclosure occurred ($100\% - 22.3\% = 77.7\%$ discount and $100\% - 7.7\% = 92.3\%$ discount, respectively). Applying those percentages to the total amount actually paid for Marlboro Lights (Product 1) by class members during the class period (\$660.1 million)¹⁰, Dr. Harris arrived at the amount, in his opinion, that represents the difference in true market value between Product 1 and Product 2 during the class period. The amount is \$512.9 million if Product 2 were disclosed as "just as harmful" as Marlboro Reds ($\$660.1 \text{ million} \times .777$). The amount is \$609.3 million if Product 2

¹⁰ Philip Morris did not contest the \$660.1 million number for total sales in the class period.

were disclosed as “could be more harmful” than Marlboro Reds (\$660.1 million x .923). Plaintiffs seek an award of actual damages in the amount of one of those two numbers.

I find that plaintiffs’ proof of actual damages is unpersuasive and inadequate. Moreover, the proof is based upon serious flaws in methodology and assumptions. Before getting into specifics, I ask whether the numbers alleged pass the common sense test. Is it rational, for example, that a cigarette disclosed as “just as harmful” as Marlboro Reds would be determined by the market to be worth only 22.3% of the price of Marlboro Lights when such a product is the functional equivalent of Marlboro Reds? Similarly, is it tenable to assert that a cigarette would ever be valued (in a true market between buyer and seller) at 7.7% of the market price of the misrepresented Marlboro Lights?¹¹ I answer both questions “No.” That skepticism concerning the alleged damages is reinforced when the specifics of how plaintiffs got to the numbers are examined.

It is undisputed that Dr. Harris’ opinion with respect to actual damages rests for its validity on the survey conducted by Dr. Dennis. If the survey does not provide relevant and meaningful results, Dr. Harris’ opinion fails and plaintiffs’ proof of actual damages fails.

The survey relied upon by plaintiffs was conducted in 2002 by Dr. Dennis in connection with another Marlboro Lights case, *Price v. Philip Morris, Inc.* in Illinois (“the *Price* survey”). Dr. Dennis conducted an internet survey from a population of individuals who had agreed to be surveyed from time to time on a number of topics. The survey population was known as the

¹¹ The discounts applied by Dr. Harris would result in the price of a pack of cigarettes being below the federal and state excise taxes levied on each pack of cigarettes and below the mandated minimum price for a pack of cigarettes under applicable Massachusetts regulations. Moreover, the discounted price would be below the cost of producing the cigarettes.

Knowledge Network. The survey population was spread across the entire United States. The first step was to identify among the survey respondents those individuals who had smoked Marlboro Lights at any time in the year leading up to 2002. A total of 276 individuals were then qualified to respond to a series of questions posed over the internet. The survey did not include any communication other than the written set of questions and responses.

The survey asked participants to choose between the two versions of Marlboro Lights described above: Product 1 and Product 2. The survey told the respondents that the two products were "identical" in all ways except that Product 1 was "safer." As would be expected, nearly all participants responded that he/she would choose the "safer" product. The participants were then asked whether they would purchase the product that was less safe at any price. If so, they were asked to specify the discount, in ten percent increments, that they would require in order to purchase the product that was less safe. The majority of respondents indicated that they would not choose the less safe product at any price. The remainder responded with their individual estimate of the discount they would require before purchasing the less safe product.

Philip Morris called as an expert witness Dr. Nancy A. Mathiowetz. Dr. Mathiowetz holds a Ph.D. in sociology from the University of Michigan. She has worked in the field of survey research for decades and has published numerous articles, book chapters and monographs regarding the principles for conducting reliable survey research. I find her testimony to be credible and persuasive.

Dr. Mathiowetz testified that the *Price* survey conducted by Dr. Dennis fails to provide meaningful and reliable information for this case for two principal reasons: (1) the sample missed the target population and (2) the survey questions were confusing, ambiguous and biased. The

first reason is the most compelling to me. The sample population was not the certified class, or a reasonable facsimile thereof. Of the 276 participants who completed the survey, only three lived in Massachusetts. The survey was taken in 2002, four years after the close of the class period. While Dr. Dennis testified that in his opinion the survey results could be projected to be the same for a Massachusetts sample during the class period, his basis for that opinion was speculative.

Dr. Mathiowetz, on the other hand, demonstrated the importance of selecting the right sample in order to obtain valid survey results. She pointed to significant differences between a Massachusetts population and a nationwide population in terms of what the populations were exposed to regarding smoking, in general, and smoking light cigarettes, in particular. Massachusetts smokers were exposed to a large-scale media campaign starting in the mid-1990s initiated by the Massachusetts Tobacco Control Program. The campaign emphasized that light cigarettes were no safer than regular, full flavor brands and explained the phenomenon of compensation. Dr. Mathiowetz also relied upon a published study in 2000, based on data collected in 1998, showing that Massachusetts smokers held significantly different perceptions about light cigarettes than those held by smokers from around the nation. Finally, the evidence showed that in the period from the end of the class period to 2002 (when the survey was done) there were significant developments in the public health community at large regarding the dangers of smoking light cigarettes. For example, the well-publicized Monograph 13 from the National Cancer Institute came out in 2001.

In sum, plaintiffs elected to use the *Price* survey rather than conduct their own survey

corresponding to the geography and time period defining the class certified in this action.¹² Dr. Mathiowetz testified that the choice by Dr. Dennis to project to this certified class the results of his 2002 nationwide survey in the *Price* litigation violated a fundamental principle for the reliability of survey research as set forth in the Reference Manual on Scientific Evidence published by the Federal Judicial Center. The manual states that, "A survey that provides information about a wholly irrelevant population is itself irrelevant." The manual suggests that the court ask, "Did the Sampling Frame Approximate the Population?" Dr. Mathiowetz answered that question "no" and I agree.

Dr. Mathiowetz also pointed out that the survey questions in the *Price* survey were confusing, ambiguous and biased. In her opinion, this was in violation of the principle implied in the following question from the Reference Manual on Scientific Evidence "Were Questions on the Survey Framed to Be Clear, Precise, and Unbiased?" Dr. Mathiowetz detailed how the questions tested for a higher reading skill level than what is acceptable for survey practice and how the questions introduced "acquiescence bias" and "status quo bias." The evidence also showed that a number of respondents indicated in the "Comments" section of the survey that it "was the worst survey I have ever seen," "tricky," "poorly stated," "hard to understand," "exceptionally confusing," and "the most ridiculous survey that I have ever been asked to complete." I accept Dr. Mathiowetz's criticisms of the *Price* survey questions and conclude that even if the survey had been of the correct population the results produced from these questions would be less than persuasive.

¹² Plaintiffs' expert, Dr. Dennis, conducted state-specific surveys for Marlboro Lights litigation in Missouri and California.

Having rejected the survey result from the *Price* survey and Dr. Dennis' attempt to project those results to the Massachusetts certified class in this case, the calculation of actual damages by Dr. Harris has no foundation. I could stop here. Plaintiffs failed to prove to a reasonable certainty a specific amount of actual damages. I will, nevertheless, comment on the flaws that I see in the methodology used by Dr. Harris to compute actual damages.

Dr. Harris attempted to value a hypothetical product during the class period - - Marlboro Lights with full disclosure that the cigarettes are just as harmful or potentially more harmful than Marlboro Reds (Product 2). Because Product 2 did not exist in the class period Dr. Harris did not have objective data about the market price of Product 2. He could not, for example, compare the price of a product that carried a particular representation (shampoo that cures dandruff) with the true market established price of a product without that representation (regular shampoo) to see how much a fraudulent seller of dandruff shampoo that was, in fact, not a dandruff shampoo, had overcharged its customers. He therefore constructed a model to determine a contingent valuation of Marlboro Lights with full disclosure. The model demonstrated the common sense conclusion that consumers would either not buy or would pay less for the fully disclosed "just as harmful" or "could be more harmful" Marlboro Lights. But the model becomes entirely subjective when it attempts to peg a specific amount consumers would be willing to pay for the fully disclosed Marlboro Lights (Product 2). The actual answers to that question ranged from zero dollars to one hundred percent of the price of Marlboro Reds. In other words, the answers showed that various members of the surveyed sample would have a different opinion as to how much they were damaged under the benefit of the bargain rule for calculation of damages. Dr. Harris then took the average of the survey respondents' subjective answers to how much they would be willing to pay

for the fully disclosed Marlboro Lights and opined that the *average* of those subjective judgments is proof of the true market value of the hypothetical Marlboro Lights with full disclosure during the class period.¹³ That methodology is flawed. The use of an average simply attempts to convert an inability to prove a specific, objective amount of actual damages to proof based upon a range of subjective opinions.¹⁴

As discussed previously, in order to recover under c. 93A, a plaintiff must prove a deceptive act *and* that he suffered an injury caused by that act. With respect to a class action under § 9 (2) of c. 93A, it must be shown that the class members suffered a “similar injury”. Based on the compelling inference that purchasers of Marlboro Lights during the class period received a product whose true market value was less than what they paid for it, I concluded that the class representative and the class members were injured as a result of the deceptive conduct of Philip Morris. The amount of that injury, however, is subject to proof. And where the proof depends upon a wholly subjective measure, it fails to establish an amount of actual damages. I find that plaintiffs have failed to carry their burden of proving an amount of actual damages.

As an alternative measure, plaintiffs seek an award of the pretax profits earned by Philip

¹³ This “willingness to pay” methodology completely ignores the other side of the equation in determining price in a market economy: the seller’s willingness to sell. Stated another way, the contingent valuation model based upon willingness to pay is a measure of the demand for the cigarette, only.

¹⁴ Another flaw in this methodology is that Dr. Harris used the responses of a majority of the participants who said they would simply not buy Marlboro Lights if accompanied with full disclosure that the cigarettes were just as harmful or could be more harmful than Marlboro Reds, to compute the average. Those respondents valued Product 2 as worth zero dollars. Thus, the average calculated by Dr. Harris to prove the true market value of the product was very substantially reduced by including the majority of respondents who, by their own response, would not be in the market for the product.

Morris by the sale of Marlboro Lights in Massachusetts during the class period. The parties stipulated to the amount: \$68,762,000.

This court (Kaplan, J.) previously ruled that plaintiffs could not recover the pretax profits of Philip Morris as an equitable remedy of disgorgement. *Aspinall - Remedies Decision* at *24. I indicated to plaintiffs that I agreed with that conclusion. Plaintiffs now offer a different approach. They say they seek to recover Philip Morris' pretax profits as an alternative measure of "actual damages."

The new approach does not aid the plaintiffs for two reasons. First, the Supreme Judicial Court already determined that the "appropriate" measure of actual damages in this case is the benefit of the bargain model, as described above. *Aspinall I* at 399.¹⁵ Second, while under certain circumstances an award of a defendant's profits may be appropriate as a measure of actual damages, those instances are limited to where the defendant's profits are a reasonable approximation of plaintiffs' injury. See, e.g., *Tyler*, 464 Mass. at 504 n.20 (2013)(disgorgement of the merchant's profits may provide an appropriate means of calculating damages because it is a close approximation of the injury to the plaintiff); *Kelley v. CVS Pharmacy, Inc.*, 2007 Mass. Super. LEXIS 381 (Mass. Super. Ct. 2007)(Gants, J.)(where actual damages were less than the \$25 statutory damage amount, defendant's profits approximate the injury to the plaintiff).

Here, Philip Morris' pretax profits do not serve as a measure of plaintiffs' injury. As

¹⁵ The Supreme Judicial Court left open the issue of whether disgorgement of profits might be available as an equitable remedy, although it was "not aware of any Massachusetts decisions holding that plaintiffs in a successful class action under G.L. c. 93A suit may, or may not, be awarded equitable monetary damages . . ." *Aspinall I* at 384 n. 5. Plaintiffs, however, now seek an award of defendant's profits as a measure of actual damages as opposed to as an equitable remedy. The measure of actual damages is the benefit of the bargain model.

described above, the injury is that plaintiffs paid too much for the deceptive Marlboro Lights. In contrast, a damage award of all of Philip Morris' profits suggests that, absent the fraud, no class members would have purchased Marlboro Lights or that members of the class received no benefit at all from the product. The evidence does not support either of those assumptions. The total of all of Philip Morris' profits does not serve as a reasonable and non-speculative estimate of the class members' injury. Thus, actual damages based upon Philip Morris' pretax profits are rejected.

II. Recovery of Statutory Damages

"In the event that the plaintiffs are unsuccessful in their attempt to prove actual damages . . . they will be entitled to recover statutory damages under G.L. c. 93A, § 9 (3) . . ." *Aspinall I* at 400. This is true because all members of the class, regardless of their individual knowledge or smoking habits, paid a higher amount for Marlboro Lights than what they would have paid in a true, efficient market for the fully disclosed Marlboro Lights. Under § 9 (3), "if the court finds for the petitioner, recovery shall be in the amount of actual damages or twenty-five dollars, whichever is greater. . . ." As already determined by this court (Kaplan, J.),¹⁶ the language of the statute mandates that the award of statutory damages, in lieu of actual damages, be made to each "petitioner" or in this case to each class member. The size of the class in this case is uncontested. Dr. Harris testified that based upon his calculation, using the court determined definition of the class, there are 197,700 members of the class. Accordingly, statutory damages in the amount of \$4,942,500 (197,700 multiplied by \$25) shall be awarded to plaintiffs.¹⁷

¹⁶ *Aspinall - Remedies Decision.*, at * 25.

¹⁷ Plaintiffs shall be entitled to prejudgment interest on the award of damages pursuant to G.L. c. 231, § 6B. *Mahan v. Hoekstra*, 88 Mass. App. Ct. 1114; 2015 WL 7357231, at *3 n.5

III. Multiple Damages Under c. 93A, § 9(3)

Section 9 (3) of c. 93A provides that “if the court finds for the petitioner, recovery shall be in the amount of actual damages or twenty-five dollars, whichever is greater; or up to three but not less than two times such amount if the court finds that the use or employment of the act or practice was a willful or knowing violation of said section two” As discussed above, I have found that Philip Morris’ deceptive acts and practices persisted through the class period and that such acts and practices were willful and knowing violations of c. 93A, § 2. Consequently, if possible, I would treble the damage award of \$4,942,500 based upon the statutory \$25 per class member calculation of damages.

Unfortunately for plaintiffs, however, binding precedent bars trebling of these damages under the facts and circumstances of this case. In *Leardi v. Brown*, 394 Mass. 151, 162 (1985) the Court stated “In circumstances where the plaintiff is entitled to treble damages under G.L. c. 93A, and where the actual damages, when trebled, are less than \$25, then the plaintiff is entitled to the statutory amount of \$25, instead of \$75.” I have found that plaintiffs here failed to prove any specific amount of actual damages. While the class members suffered an injury of at least a penny as a result of purchasing Marlboro Lights cigarettes that were just as harmful or potentially more harmful than Marlboro Reds, I have no evidential basis for quantifying the actual damages of each class member. Accordingly, I cannot find that a class member’s actual damages, when trebled, would exceed \$25. Given the mandate of *Leardi*, an award of multiple damages is denied.

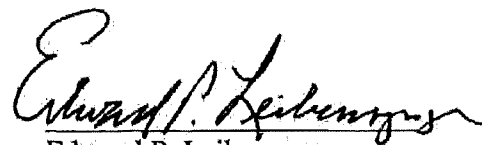
(Nov. 23, 2015)(Rule 1:28 decision)(an award of statutory damages under c. 93A is properly characterized as compensatory and, thus, falls within the class of damages to which prejudgment interest applies). Prejudgment interest is at the rate of 12% from the date of the commencement of the action (November 1998). If judgment were entered at this time, prejudgment interest would be approximately 207% of the damages awarded.

CONCLUSION AND ORDER

For the reasons stated above, I find that Philip Morris' acts and practices with respect to the marketing and sale of Marlboro Lights during the class period were willfully and knowingly deceptive in violation of c. 93A. Class members, individuals who purchased Marlboro Lights in Massachusetts during the class period, suffered a distinct economic injury caused by the deceptive acts; namely, they paid too much for the misrepresented cigarettes. Because plaintiffs could not prove with reasonable certainty a specific measure of the actual damages incurred by the class members as a result of the deception, I award damages of the statutory amount of \$25 per class member, or a total of \$4,942,500, plus prejudgment interest.


As the prevailing party, the class is entitled to an award of reasonable attorney's fees and costs incurred in connection with this action pursuant to § 9 (4) of c. 93A. It is hereby **ORDERED** that plaintiffs' serve, pursuant to Superior Court Rule 9A, a motion for attorney's fees and costs supported by detailed affidavits. Such motion shall be served by March 21, 2016. When the Rule 9A package is submitted to the court, the court will schedule oral argument. If either side desires an evidentiary hearing with respect to the award of fees and costs, the party should inform the court and describe why an evidentiary hearing is necessary.

By the Court,


Edward P. Leibensperger
Justice of the Superior Court

Dated: February 19, 2016

This is Exhibit "M" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.

A handwritten signature in cursive script, appearing to read "Nicola Hartigan", written over a horizontal line.

A Commissioner of taking Affidavits
in the Province of British Columbia

Tobacco Class Action
 400 – 1385 West 8th Avenue
 Vancouver, BC
 V6H 2V9

File #23151

January 10, 2025

STATEMENT OF ACCOUNT

RE: Tobacco Class Action
 Mr. Kenneth Knight, Representative Plaintiff

DISBURSEMENTS

2003-04-17	Cigarettes	66.83
2003-05-01	Dye & Durham Agency Fee	21.50
2003-05-08	Filing Fee	208.00
2003-05-08	Dye & Durham Agency Fee	17.00
2003-05-08	Canada News Wire Ltd. Press Release	74.58
2003-05-27	Dye & Durham Agency Fee	146.04
2003-07-31	Richard W. Pollay Expert Fee	10,000.00
2003-07-31	Richard W. Pollay Expert Fee	5,525.00
2003-09-29	Travel Expense – D. Klein Meal Reimbursement – Breakfast Lunch Dinner	98.46
2003-09-30	Travel Expense – D. Klein Taxi	45.00
2003-10-10	Travel Expense – D. Klein Meal Reimbursement	15.34
2003-10-20	Charles River Assoc. Limited Expert Research Invoices 001131 & 001115	9,890.25
2003-11-10	Flight – D. Klein Nov.10/03 Philadelphia	888.92
2003-11-10	Flight – D. Lennox Nov.10/03 Philadelphia	1,313.35
2003-11-10	Travel Expense - D. Klein Taxi (USD)	94.36
2003-12-09	Parking Reimbursement D. Klein	2.80
2003-12-31	Facsimile	16.00#
2003-12-31	Copying	317.60#
2003-12-31	Courier	122.09
2003-12-31	Postage	56.19
2003-12-31	Interest on 2003 disbursements to January 10, 2025	59,358.27
2004-01-22	Parking Reimbursement D. Klein	5.26
2004-01-28	Parking Reimbursement D. Klein	15.44
2004-01-28	Dye & Durham Agency Fee	9.00
2004-02-16	Superior Imaging Solutions	791.17

	External Photocopying	
2004-02-16	Superior Imaging Solutions	81.50
	External Photocopying	
2004-02-20	Dye & Durham	9.00
	Agency Fee	
2004-05-17	Superior Imaging Solutions	209.84
	External Photocopying	
2004-10-21	Dye & Durham	31.50
	Agency Fee	
2004-10-22	Dye & Durham	31.50
	Agency Fee	
2004-10-26	Dye & Durham	71.00
	Agency Fee	
2004-10-29	Travel Expense	1,062.86
	Flight - D. Lennox	
	Oct.23-29/04 Toronto/Vancouver	
2004-11-09	Travel Expense	102.80
	Taxi Reimbursement - D. Lennox	
2004-12-31	Facsimile	26.54
2004-12-31	Copying	1,665.00
2004-12-31	Courier	384.16
2004-12-31	Postage	59.04
2004-12-31	Interest on 2004 disbursements to January 10, 2025	7,911.22
2005-02-21	Dye & Durham	43.00
	Court Copies of Reasons For Judgement and Fee	
2005-03-16	Dye & Durham	32.50
	Notice of Appearance & special pickup	
2005-03-16	Dye & Durham	32.50
	Notice of Appearance and Special Return	
2005-07-21	Dye & Durham	9.00
	Agency Fee	
2005-07-22	Dye & Durham	33.00
	Agency Fee	
2005-09-19	Dye & Durham	9.00
	Agency Fee	
2005-12-31	Facsimile	43.00
2005-12-31	Copying	368.85
2005-12-31	Courier	101.59
2005-12-31	Postage	347.60
2005-12-31	Interest on 2005 disbursements to January 10, 2025	1,938.08
2006-01-25	Travel Expense	556.35
	Flight - D. Lennox	
	Feb. 6-7/06 Toronto/Vancouver	
2006-01-25	Travel Expense	581.49
	Hotel Reimbursement - D. Lennox	
	Vancouver February 6-7/06	
2006-02-06	Travel Expense	265.56
	Hotel Reimbursement - D. Klein	
2006-02-06	Travel Expense	40.42
	Meal Reimbursement – D. Klein	
2006-02-06	Dye & Durham	32.48
	Agency Fee	
2006-02-12	Travel Expense – D. Klein	25.00
	Taxi	
2006-02-17	Travel Expense – D. Klein	26.00
	Taxi	

2006-02-17	Travel Expense – D. Klein	55.00
	Taxi	
2006-03-22	Travel Expense - D. Lennox	106.00
	Taxis	
2006-05-11	Dye & Durham	24.50
	Agency Fee	
2006-06-08	Bernardino & Harris LLP	3,177.40
	1/3 Copying Charges - Appeal Books	
2006-07-25	Parking Reimbursement	6.00
	D. Klein	
2006-10-25	Dye & Durham	9.00
	Agency Fee	
2006-10-27	Dye & Durham Filing Fee	23.00
2006-11-09	Dye & Durham Filing Fee	9.00
2006-12-13	Travel Expense	777.30
	Flight – D. Klein	
2006-12-31	QuickLaw – Research	31.41
2006-12-31	Long Distance	168.69
2006-12-31	Facsimile	35.50
2006-12-31	Copying	252.60
2006-12-31	Courier	17.65
2006-12-31	Postage	92.98
2006-12-31	Interest on 2006 disbursements to January 10, 2025	11,365.79
2007-01-25	Dye & Durham Court Costs	9.00
2007-01-30	Dye & Durham Court Costs	75.00
2007-04-30	Dye & Durham	10.00
	Filing	
2007-05-18	Travel – Parking	13.00
2007-07-11	Dye & Durham	16.50
	Court Costs	
2007-10-22	Legal Research (Court Services Online)	15.10
	Reimbursement – D. Lennox	
2007-12-31	QuickLaw – Research	335.91
2007-12-31	Long Distance	56.32
2007-12-31	Facsimile	10.50
2007-12-31	Courier	5.35
2007-12-31	Copying	841.53
2007-12-31	Postage	67.54
2007-12-31	Interest on 2007 disbursements to January 10, 2025	2,474.78
2008-05-12	Travel Expense	363.00
	Hotel Reimbursement – D. Lennox	
	Vancouver July 7 & 8, 2008	
2008-05-12	Travel Expense	1,294.33
	Flight - D. Lennox	
	Jul 7-9/08 Toronto/Vancouver	
2008-07-10	Platinum Legal Group Inc.	225.00
	Technical Support	
2008-08-06	Charest Reporting Inc.	413.95
	XFD Transcript	
2008-10-27	Dye & Durham Filed Requisition	9.00
2008-12-19	Dye & Durham	11.00
	File Subsequent Civil Documents	
2008-12-30	Arc Digital Canada Corp	243.26
	External Photocopying	
2008-12-31	Long Distance	2.40
2008-12-31	Postage	1.00

2008-12-31	Copying	350.90
2008-12-31	Courier	90.48
2008-12-31	Interest on 2008 disbursements to January 10, 2025	4,806.91
2009-02-05	Parking Reimbursement D. Klein	6.00
2009-02-05	Travel Expense Flight - D. Lennox Feb 3-4/09 Toronto/Vancouver	488.33
2009-02-05	Parking Reimbursement D. Klein	6.00
2009-02-11	Charest Reporting Inc. Transcript of Cross-Examination	324.95
2009-02-24	Dye & Durham Submission	21.00
2009-03-20	Parking Reimbursement D. Klein	3.00
2009-03-20	Parking Reimbursement D. Klein	6.00
2009-04-07	Travel Expense – D. Klein Meal Reimbursement	34.98
2009-04-27	Travel Expense Meal Reimbursement - D. Lennox	22.56
2009-04-28	Purolator Courier Ltd. Courier	27.67
2009-05-04	Parking Reimbursement D. Klein	13.00
2009-05-04	Travel Expense Flight - D. Lennox May 2009 Toronto/Vancouver	652.33
2009-06-01	Parking Reimbursement D. Klein	13.00
2009-06-29	Travel Expense Flight - D. Lennox May 26 – June 12, 2009, Toronto/Vancouver	378.00
2009-08-04	QRC Logistics Ltd. Courier	9.78
2009-09-29	Print Three Document Management	96.55
2009-10-15	QRC Logistics Ltd. Courier	9.76
2009-11-03	Hunter Litigation Chambers KL Portion of external printing and bindery costs	867.45
2009-12-02	Crank Web Work Website Maintenance	42.50
2009-12-08	Dye & Durham Agency Fee	26.75
2009-12-31	Long Distance	8.28
2009-12-31	Facsimile	4.00
2009-12-31	Courier	60.22
2009-12-31	Copying	1,011.50
2009-12-31	Postage	2.70
2009-12-31	Interest on 2009 disbursements to January 10, 2025	6,204.47
2010-12-31	Long Distance	15.98
2010-12-31	Copying	36.75
2010-12-31	Courier	11.50
2010-12-31	Interest on 2010 disbursements to January 10, 2025	89.92

2011-02-08	Travel Expense	583.36
	Flight – D. Lennox	
	Toronto/Ottawa	
2011-02-28	Travel Expense	477.75
	Reimbursement Meals & Taxis- D. Lennox	
2011-03-18	Purolator Inc.	68.69
	Courier	
2011-12-30	Triage Data Solutions	493.75
	Document Management Fee	
	Invoice No. 4925	
2011-12-31	Long Distance	0.48#
2011-12-31	Courier	69.24
2011-12-31	Postage	1.18
2011-12-31	Copying	6,678.05
2011-12-31	Interest on 2011 disbursements to January 10, 2025	10,884.25
2012-03-13	Travel Expense	260.21
	Reimbursement Hotel & Taxis- D. Lennox	
2012-12-31	Copying	5,448.85
2012-12-31	Postage	0.61
2012-12-31	Interest on 2012 disbursements to January 10, 2025	6,851.72
2013-12-31	Copying	51.45
2013-12-31	Postage	29.61
2013-12-31	Interest on 2013 disbursements to January 10, 2025	89.17
2014-10-20	Dye & Durham	11.95
	Agency Fee	
2014-12-31	Court filing fee	7.00
2014-12-31	Copying	15.40
2014-12-31	Interest on 2014 disbursements to January 10, 2025	27.35
2015-10-02	Memory keys-Aug.12/15	73.84
2015-10-16	Meal Reimbursement	41.43
	D. Klein	
2015-12-31	Long Distance	1.90
2015-12-31	Postage	30.80
2015-12-31	Copying	128.44
2015-12-31	Interest on 2015 disbursements to January 10, 2025	329.05
2016-02-15	Anne Landman Research & Consulting	2,141.74
	Expert Fees – Inv. 001	
2016-03-29	Anne Landman Research & Consulting	6,385.08
	Expert Fees – Inv. 002	
2016-04-13	Anne Landman Research & Consulting	3,064.08
	Expert Fees - Inv:003	
2016-05-24	Anne Landman Research & Consulting	5,011.36
	Expert Fee – Inv. 004	
2016-06-13	Anne Landman Research & Consulting	4,101.44
	Expert Fee - Inv: 005	
2016-08-24	OnPoint Legal Research Law Corp.	4,747.50
	Legal Research fees - Invoice No. 16-156	
2016-09-08	Travel Expense	1,039.25
	Flight - D. Lennox	
	Sept.11-17/16 Toronto/Vancouver Air Canada	
2016-09-16	Meal Reimbursement	215.70
	D. Klein	
2016-09-19	Meal Reimbursement	11.94
	D. Klein	

2016-09-23	Travel Expense	637.25
	Flight - D. Lennox	
	Oct. 18-21/16 Toronto/Vancouver	
2016-09-30	Travel Expense	62.05
	Reimbursement Taxi - D. Lennox	
2016-09-30	Travel Expense	29.57
	Reimbursement Taxi - D. Lennox	
2016-09-30	Travel Expense	912.00
	Reimbursement Hotel - D. Lennox	
2016-09-30	Travel Expense	25.81
	Meal Reimbursement - D. Lennox	
2016-09-30	Travel Expense	61.75
	Meal Reimbursement - D. Lennox	
2016-10-11	Travel Expense	1,106.25
	Flight - D. Lennox	
	Oct. 11-15/16 Toronto/Vancouver	
2016-10-24	USB	7.19
2016-10-27	Peter Byron Rogers	1,875.00
	Expert Fee – Invoice No. 161024	
2016-11-01	Travel Expense	13.71
	Reimbursement Taxi - D. Lennox	
	Sept.11-17/16	
2016-11-01	Travel Expense	12.00
	Meal Reimbursement - D. Lennox Sept.11-17/16	
2016-11-01	Travel Expense	30.00
	Meal Reimbursement - D. Lennox	
	Sept.11-17/16	
2016-11-01	Travel Expense	583.00
	Reimbursement Hotel - D. Lennox	
	Sept.11-17/16	
2016-11-01	Travel Expense	27.20
	Reimbursement Taxi - D. Lennox	
	Sept.11-17/16	
2016-11-01	Travel Expense	80.50
	Meal Reimbursement - D. Lennox	
	Sept.11-17/16	
2016-11-01	Travel Expense	69.30
	Reimbursement Taxi - D. Lennox	
	Oct. 11-15/16	
2016-11-01	Travel Expense	64.90
	Reimbursement Taxi - D. Lennox	
	Oct. 11-15/16	
2016-11-01	Travel Expense	236.07
	Reimbursement Hotel - D. Lennox	
	Oct. 11-15/16	
2016-11-01	Travel Expense	70.40
	Meal Reimbursement - D. Lennox	
	Oct. 11-15/16	
2016-11-01	Travel Expense	258.19
	Reimbursement Hotel - D. Lennox	
	Oct. 11-15/16	
2016-11-30	Crosson Valuation LLP	10,082.63
	Expert Fee Invoice No. 1446	
2016-12-07	Federal Express Canada Ltd.	68.81
	Courier Inv: 7-352-79899	

2016-12-19	Reimbursement – D. Sall	115.00
	External printing and bindery costs	
2016-12-19	Parking Reimbursement	16.00
	D. Sall	
2016-12-31	Court Filing Fees	7.00
2016-12-31	BC Online Fees	49.00
2016-12-31	Long Distance	2.80
2016-12-31	Courier	68.81
2016-12-31	Postage	7.86
2016-12-31	Copying	637.35
2016-12-31	Interest on 2016 disbursements to January 10, 2025	35,202.99
2017-01-19	Travel Expense	799.25
	Flight - D. Lennox	
	Jan 29-Feb 4/17 Toronto/Vancouver	
2017-02-02	Parking Reimbursement	7.50
	D. Sall	
2017-02-07	Federal Express Canada Ltd.	78.57
	Courier Inv #: 7-359-35520	
2017-02-09	David Hammond	7,042.00
	Expert Fee – Invoice 01	
2017-02-10	Travel Expense	694.00
	Reimbursement Airbnb - D. Lennox	
2017-02-10	Travel Expense	98.40
	Reimbursement Uber - D. Lennox	
2017-02-10	Travel Expense	28.00
	Reimbursement Taxi - D. Lennox	
2017-02-10	Travel Expense	29.30
	Reimbursement Taxi - D. Lennox	
2017-02-10	Travel Expense	120.00
	Flight Fee	
	Jan. 29/17 – Vancouver to Toronto	
2017-04-20	Dye & Durham	81.00
	Agent's Fees	
2017-05-25	Purolator Inc.	28.12
	Courier Inv: 434652047	
2017-06-02	Travel Expense	1,117.25
	Flight - D. Lennox	
	Jun 18-25/17 Toronto/Vancouver	
2017-06-07	Vertical Response – Eblast to Class Members	4.60
2017-06-20	Parking Reimbursement	3.75
	D. Sall	
2017-06-20	Parking Reimbursement	7.50
	D. Sall	
2017-06-20	Parking Reimbursement	3.75
	D. Sall	
2017-06-21	Dye & Durhan	32.00
	Agent's Fees	
2017-06-21	Dye & Durhan	89.00
	Agent's Fees	
2017-06-26	Vertical Response – Eblast to Class Members	4.33
2017-06-30	Travel Expense	70.00
	Meal Reimbursement - D. Lennox	
	Jan 29-Feb 4/17	
2017-06-30	Travel Expense	25.00
	Meal Reimbursement - D. Lennox	
	Jan 29-Feb 4/17	

2017-06-30	Travel Expense	27.30
	Meal Reimbursement - D. Lennox	
	Jan 29-Feb 4/17	
2017-06-30	Travel Expense	1,531.67
	Reimbursement Hotel - D. Lennox	
	Jan 29-Feb 4/17	
2017-06-30	Travel Expense	18.32
	Reimbursement Taxi - D. Lennox	
	Jan 29-Feb 4/17	
2017-06-30	Travel Expense	42.38
	Reimbursement Taxi - D. Lennox	
2017-06-30	Travel Expense	45.00
	Meal Reimbursement - D. Lennox	
	Jun 18-25/17	
2017-06-30	Travel Expense	703.44
	Reimbursement Hotel - D. Lennox	
	Jun 18-25/17	
2017-06-30	Travel Expense	45.00
	Reimbursement Taxi - D. Lennox	
	Jun 18-25/17	
2017-06-30	Travel Expense	42.38
	Reimbursement Taxi - D. Lennox	
	Jun 18-25/17	
2017-06-30	Travel Expense	20.00
	Meal Reimbursement - D. Lennox	
	Jun 18-25/17	
2017-12-31	QuickLaw – Research	1,365.00
2017-12-31	Mileage	11.85
2017-12-31	Long Distance	4.70
2017-12-31	Courier	106.69
2017-12-31	BC Online Fees	21.00
2017-12-31	Postage	89.36
2017-12-31	Copying	2,882.70
2017-12-31	Interest on 2017 disbursements to January 10, 2025	12,194.08
2018-02-13	Parking Reimbursement	3.75
	D. Sall	
2018-02-15	Vertical Response – Eblast to Class Members	9.64
2018-03-20	Bruneau Group Inc.	7,600.00
	INV. 2018-106	
2018-12-31	QuickLaw – Research	980.00
2018-12-31	Mileage	2.86
2018-12-31	Long Distance	1.50
2018-12-31	Facsimile	1.00
2018-12-31	Postage	52.90
2018-12-31	Copying	2,920.75
2018-12-31	Court filing fees	122.00
2018-12-31	BC Online Fees	140.00
2018-12-31	Interest on 2018 disbursements to January 10, 2025	7,027.44
2019-03-21	Travel Expense	1,291.24
	Flight - D. Klein	
	Apr 2-4/19 Toronto/Vancouver	
2019-04-03	Travel Expense	43.40
	Reimbursement Uber - D. Klein	
2019-04-03	Travel Expense	2.75
	Reimbursement Uber - D. Klein	

2019-04-03	Travel Expense	23.41
	Reimbursement Uber - D. Klein	
2019-04-04	Travel Expense	18.94
	Reimbursement Uber - D. Klein	
2019-04-04	Travel Expense	60.00
	Reimbursement Parking- D. Klein	
2019-04-04	Travel Expense	20.00
	Reimbursement Transit – D. Klein	
2019-04-08	Vertical Response – Eblast to Class Members	7.87
2019-04-12	Crosson Valuation Inc.	18,580.28
	Expert Fee – Invoice No. 2136	
2019-04-16	Print Three	207.32
	External printing and Bindery Costs	
2019-05-13	BC Courthouse Library – Copy Fee	41.00
2019-05-21	Travel Expense	680.40
	Reimbursement Hotel - D. Lennox	
	Oct 23/15	
2019-05-21	Travel Expense	27.50
	Reimbursement Transit - D. Lennox	
	Oct 23/15	
2019-05-21	Travel Expense	32.62
	Reimbursement Taxi - D. Lennox	
	Oct 23/15	
2019-05-21	Travel Expense	12.00
	Reimbursement Taxi - D. Lennox	
	Oct 23/15	
2019-05-21	Travel Expense	33.67
	Reimbursement Taxi - D. Lennox	
	Oct 23/15	
2019-05-21	Travel Expense	67.35
	Reimbursement Taxi - D. Lennox	
	Oct 23/15	
2019-08-14	Print Three	16.00
	External printing and Bindery Costs – Invoice No. 48047	
2019-10-06	Travel Expense	874.50
	Flight: D. Klein	
	Oct. 6-8/19 Vancouver to Toronto	
2019-10-06	Travel Expense – D. Klein	66.96
	Meal Reimbursement	
2019-10-07	Travel Expense – D. Klein	53.00
	Meal Reimbursement	
2019-10-07	Travel Expense	42.22
	Reimbursement Uber - D. Klein	
2019-10-08	Travel Expense	6.33
	Reimbursement Uber - D. Klein	
2019-10-09	Travel Expense	19.79
	Reimbursement Uber - D. Klein	
2019-11-01	Travel Expense – D. Klein	71.50
	Meal Reimbursement	
2019-12-04	Travel Expense	3,052.50
	Flight - D. Klein	
	Dec 10-11/19 Vancouver/Toronto	
2019-12-10	Travel Expense – D. Klein	60.60
	Meal Reimbursement	
2019-12-10	Internet Fee (In Air)	9.10
	Gogoair.com - D. Klein	

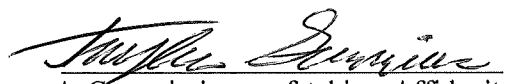
2019-12-10	Travel Expense – D. Klein	11.45
	Meal Reimbursement	
2019-12-11	Travel Expense	20.00
	Reimbursement Transit - D. Klein	
2019-12-11	Travel Expense	21.58
	Reimbursement Uber - D. Klein	
2019-12-13	Travel Expense	2,414.46
	Flight - D. Klein	
	Jan 6-9/20 Vancouver/Toronto	
2019-12-17	Travel Expense – D. Klein	2.35
	Meal Reimbursement	
2019-12-31	QuickLaw – Research	181.00
2019-12-31	BC Online Fees	12.00
2019-12-31	Long Distance	66.89
2019-12-31	Facsimile	87.00
2019-12-31	Postage	49.74
2019-12-31	Copying	310.45
2019-12-31	Interest on 2019 disbursements to January 10, 2025	14,144.36
2020-01-06	Travel Expense – D. Klein	42.50
	Meal Reimbursement	
2020-01-07	Travel Expense	42.30
	Reimbursement Uber - D. Klein	
2020-01-08	Travel Expense	18.42
	Reimbursement Uber - D. Klein	
2020-01-08	Travel Expense	23.91
	Reimbursement Uber - D. Klein	
2020-01-08	Travel Expense	20.48
	Reimbursement Uber - D. Klein	
2020-01-08	Travel Expense – D. Klein	55.95
	Meal Reimbursement	
2020-01-09	Travel Expense	3.57
	Reimbursement Uber - D. Klein	
2020-01-09	Travel Expense	21.10
	Reimbursement Uber - D. Klein	
2020-01-10	Travel Expense	19.62
	Reimbursement Uber - D. Klein	
2020-01-14	Travel Expense	2,648.00
	Flight - D. Klein	
	Jan 20-23/20 – Vancouver/Toronto	
2020-01-19	Travel Expense – D. Klein	8.50
	Meal Reimbursement	
2020-01-21	Travel Expense – D. Klein	43.39
	Meal Reimbursement	
2020-01-21	Travel Expense	8.31
	Meal – D. Klein	
2020-01-21	Travel Expense	693.68
	Reimbursement Hotel - D. Klein	
	Jan 20-22/20	
2020-01-21	Travel Expense – D. Klein	20.00
	Meal Reimbursement	
2020-01-22	Travel Expense – D. Klein	27.00
	Meal Reimbursement	
2020-01-22	Travel Expense – D. Klein	50.25
	Meal Reimbursement	
2020-01-22	Travel Expense – D. Klein	8.35
	Meal Reimbursement	

2020-01-22	Travel Expense – D. Klein	60.95
	Meal Reimbursement	
2020-12-31	QuickLaw – Research	108.75
2020-12-31	Long Distance	8.47
2020-12-31	Facsimile	8.50
2020-12-31	Copying	756.60
2020-12-31	Interest on 2020 disbursements to January 10, 2025	1,879.44
2021-12-31	BC Online Fees	12.00
2021-12-31	Long Distance	13.25
2021-12-31	Facsimile	3.50
2021-12-31	Copying	228.60
2021-12-31	Interest on 2021 disbursements to January 10, 2025	77.21
2022-04-30	RGN (Regus)Manage.	83.00
	INV 946-48003 Meeting room (Apr 2022)	
2022-12-31	QuickLaw – Research	750.00
2022-12-31	Long Distance	20.70
2022-12-31	Copying	183.30
2022-12-31	Interest on 2022 disbursements to January 10, 2025	207.40
2023-12-31	Long Distance	11.80
2023-12-31	Copying	203.55
2023-12-31	Interest on 2023 disbursements to January 10, 2025	43.07
2024-12-31	Long Distance	49.55
2024-12-31	Copying	512.30
2024-12-31	Interest on 2024 disbursements to January 10, 2025	56.99
2025-01-08	Long Distance	8.05
2025-01-08	Sheller PC (\$436,839.50 USD) (1.4396)	628,874.14
2025-01-08	Charles S. Tauman (\$47,170.00USD) (1.4396)	67,905.93
2025-01-08	Trust Administration Fee	15.00
	Total Disbursements	<u>1,052,025.30</u>
	Total Disbursements	\$1,052,025.30
	GST on taxable disbursements	\$8,604.06
	PST on taxable disbursements	<u>\$2,117.26</u>
	TOTAL	<u>\$1,062,746.62</u>

Tax Number: 804173581 RT0001
 # GST and PST applied

E&OE

This is Exhibit "N" referred to in the Affidavit of Nicola Hartigan sworn before me this 13th day of January 2025.


A Commissioner of taking Affidavits
in the Province of British Columbia



1515 MARKET STREET, STE 1100
PHILADELPHIA, PA 19102

(215) 790-7300
FAX (215) 790-7313

Stephen A. Sheller, Esq.
sasheller@sheller.com

Re: Light Cigarettes Canada

Legal services provided by Sheller, P.C. for the period of 2003 to 2024.

2003

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 475.00	23.3	\$ 11,067.50
Beth York	\$ 225.00	82.6	\$ 18,585.00
John Daniels	\$ 160.00	3.3	\$ 528.00
2003 total			\$ 30,180.50

2004

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 550.00	110.1	\$ 60,555.00
Beth York	\$ 225.00	109.7	\$ 24,682.50
2004 total			\$ 85,237.50

2005

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 615.00	79.8	\$ 49,077.00
Beth York	\$ 225.00	119.9	\$ 26,977.50
George Badey (Admitted 1982)	\$ 475.00	32.5	\$ 15,437.50
Dave Berney (Admitted 1993)	\$ 320.00	0.2	\$ 64.00
2005 total			\$ 91,556.00

2006

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 625.00	60.9	\$ 38,062.50
2006 total			\$ 38,062.50

2009

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 675.00	0.8	\$ 540.00
2009 total			\$ 540.00

2011

Lawyer/Paralegal	Hourly rate	Hours	Total
Marty Wivell (Admitted 1981)	\$ 575.00	222.2	\$ 127,765.00
2011 total			\$ 127,765.00

2012

Lawyer/Paralegal	Hourly rate	Hours	Total
Marty Wivell (Admitted 1981)	\$ 625.00	63.6	\$ 39,750.00
2012 total			\$ 39,750.00

2015

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 850.00	8.9	\$ 7,565.00
2015 total			\$ 7,565.00

2016

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 910.00	4	\$ 3,640.00
2016 total			\$ 3,640.00

2017

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 980.00	0.5	\$ 490.00
2017 total			\$ 490.00

2021

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 980.00	0.5	\$ 490.00
2021 total			\$ 490.00

2022

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 980.00	3.2	\$ 3,136.00
2022 total			\$ 3,136.00

2023

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 1,040.00	2	\$ 2,080.00
2023 total			\$ 2,080.00

2024

Lawyer/Paralegal	Hourly rate	Hours	Total
Stephen Sheller (Admitted 1964)	\$ 1,040.00	2	\$ 2,080.00
2024 total			\$ 2,080.00

Time Total \$432,572.50**Costs**

Date	Event	Amount
October 25-29, 2004	Vancouver Meeting (Estimated air time and meeting time)	
	Estimated Food, hotel, airfare, parking	\$2,175.00
February 7-8, 2006	Vancouver Meeting (Estimated air time and meeting time)	
	Estimated Food, hotel, airfare, parking	\$1,157.00
October 26-30, 2006	Cape May Meeting (Limo charges, dinner, Washington Inn)	\$935.00

Costs Total \$4,267.00**TOTAL: \$436,839.50**

This is Exhibit "O" referred to in the
Affidavit of Nicola Hartigan sworn
before me this 13th day of January
2025.

A handwritten signature in cursive script, appearing to read "Nicola Hartigan".

A Commissioner of taking Affidavits
in the Province of British Columbia

Charles S. Tauman

**Attorney at Law
PO Box 19631
Portland OR 97280**

Re: Knigh v Imperial Tobacco (British Columbia Supreme Court No. L031300)

Attorney Fees for Charles S. Tauman, Oregon State Bar No. 77-3710,
Admitted in 1977

Year	Rate	Hours	Total
2015	\$420	15.3	\$6,426.00
2016	\$420	28.0	\$11,760.00
2017	\$420	13.7	\$5,754.00
2018	\$460	14.2	\$6,532.00
2019	\$460	27.9	\$12,834.00
2020	\$460	7.9	\$3,634.00
2021	\$460	.5	\$230.00
TOTAL			\$47,170.00

**IN THE MATTER OF the *Companies' Creditors Arrangement Act*, R.S.C. 1985, c. C-36,
as amended**

**AND IN THE MATTER OF A PLAN OF COMPROMISE OR ARRANGEMENT OF
IMPERIAL TOBACCO CANADA LIMITED AND IMPERIAL TOBACCO
COMPANY LIMITED**

Court File No: CV-19-616077-00CL
410

APPLICANTS

Ontario
**SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST**

Proceeding commenced at Toronto

AFFIDAVIT OF NICOLA HARTIGAN

KLEIN LAWYERS LLP
400 -1385 West 8th Avenue
Vancouver, BC V6H 3V9
Phone: 604 874-7171
Fax: 604 874-7180

David Klein
dklein@kleinlawyers.com
Douglas Lennox LSO#40540A
dlennox@callkleinlawyers.com

Lawyers for the Knight Class
Action Plaintiffs

TAB 3

Court File No. CV-19-616077-
00CL

**ONTARIO
SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST**

THE HONOURABLE) , THE DAY OF
)
CHIEF JUSTICE MORAWETZ) JANUARY, 2025

IN THE MATTER OF THE *COMPANIES' CREDITORS
ARRANGEMENT ACT*, R.S.C. 1985, c. C-36, AS AMENDED

AND IN THE MATTER OF A PLAN OF COMPROMISE OR
ARRANGEMENT OF IMPERIAL TOBACCO CANADA
LIMITED AND IMPERIAL TOBACCO COMPANY
LIMITED

APPLICANTS

ORDER

(Approval of Knight Class Counsel Fee)

THIS MOTION made by the Knight Class Action Plaintiffs pursuant to Article 14.9 (1) of the CCAA Plan in this proceeding was heard January 29, 2025 by judicial video conference in Toronto, Ontario.

ON READING the Notice of Motion of the Knight Class Action Plaintiffs, the Affidavit of Nicola Hartigan, and on hearing the submissions of counsel,

THIS COURT ORDERS that:

1. The retainer agreement between Knight Class Counsel and the representative plaintiff, Mr. Kenneth Knight, dated April 22, 2003, is hereby approved.

2. The Knight Class Counsel Fee to be paid out of and deducted from the Knight Class Action Plaintiffs Settlement Amount is approved and shall be paid to Knight Class Counsel in accordance with the CCAA Plan in this proceeding in the amount of \$5 million dollars plus applicable sales taxes for class counsel legal fees and \$1,062,746.62 for disbursements.

 3. Knight Class Counsel may pay an honorarium to the representative plaintiff, Mr. Knight, from their fee in the amount of \$10,000.
-
-

IN THE MATTER OF the *Companies' Creditors Arrangement Act*, R.S.C. 1985, c. C-36,
as amended

AND IN THE MATTER OF A PLAN OF COMPROMISE OR ARRANGEMENT OF
IMPERIAL TOBACCO CANADA LIMITED AND IMPERIAL TOBACCO
COMPANY LIMITED

APPLICANTS

ONTARIO
SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST

Proceeding Commenced at Toronto

ORDER
(Motion to Approve Knight Class Counsel Fee)

KLEIN LAWYERS LLP
400 -1385 West 8th Avenue
Vancouver, BC V6H 3V9
Phone: 604 874-7171
Fax: 604 874-7180

David Klein
dklein@callkleinlawyers.com

Douglas Lennox LSO#40540A
dlennox@callkleinlawyers.com

Lawyers for the Knight Class Action
Plaintiffs

**IN THE MATTER OF the *Companies' Creditors Arrangement Act*, R.S.C. 1985, c. C-36, as amended
AND IN THE MATTER OF A PLAN OF COMPROMISE OR ARRANGEMENT OF IMPERIAL
TOBACCO CANADA LIMITED AND IMPERIAL TOBACCO COMPANY LIMITED**

Court File No: CV-19-616077-00CL

APPLICANTS

Ontario
**SUPERIOR COURT OF JUSTICE
COMMERCIAL LIST**

Proceeding commenced at Toronto

**MOTION RECORD OF KNIGHT CLASS
ACTION PLAINTIFFS**
(Motion to Approve Knight Class Counsel Fee)

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