2. Industry Research on Maintaining Adequate Nicotine Delivery When Lowering Tar

Product design to ensure adequate nicotine absorption by the smoker appears to have been driven, to a large extent, by the growing awareness of smoking-related diseases and the resulting efforts of the tobacco companies to provide cigarettes that delivered lower quantities of known toxic smoke constituents, in particular tar. However, reducing tar levels tends to also reduce the nicotine content.³⁷³ Thus, the industry has known that in designing lower-yield products, nicotine delivery could not be reduced below a certain threshold.³⁷⁴ In order to reduce tar while maintaining a level of nicotine delivery that would satisfy consumers' desire for the pharmacological effects of nicotine, the industry has focused considerable attention and research on how to maintain or enhance the amount of nicotine delivered by lower-tar products.

A patent held by Imperial Tobacco Ltd. states that the purpose of the technology described in the patent is to permit a cigarette manufacturer to maintain or increase nicotine levels while lowering levels of "undesirable" smoke constituents:

[This] invention concerns ... the problem of maintaining or increasing the nicotine content of the smoke whilst avoiding an undesirable level of particulate

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Spears AW, Jones ST. Chemical and physical criteria for tobacco leaf of modern day cigarettes. Recent Advances in Tobacco Science. 1981;7:19-39.

Regulation of Nicotine under the Federal Food, Drug and Cosmetic Act: Hearings Before the Subcommittee on Health and the Environment of the House Committee on Energy and Commerce, 103rd Cong., 2d Sess. (March 25, 1994) (statement of AW Spears, at pp. 1-3).

³⁷⁴ See Project Wheat - Part 2, note 204, supra, at p. 48:

Concern for the possible health risks of smoking influences consumers in the direction of trying low delivery brands.... However, there is evidence of a conflict between concern for health and the desire for a satisfying cigarette, from which it follows that low tar brands would be much more widely accepted if their nicotine deliveries could be brought within the range required by groups of consumer[s].