(ii.) Control Over Nicotine Levels. Tobacco manufacturers also deliberately control the level of nicotine in cigarettes by monitoring and adjusting nicotine levels at each stage of the manufacturing process. The ultimate objective of these efforts is to ensure that the finished cigarette delivers the desired level of nicotine.¹²

Perhaps the best example of manufacturers' control of nicotine levels is the effort that the companies make to ensure that low-tar cigarettes deliver an adequate amount of nicotine. As described in the preceding subsection, tobacco industry research activities have focused on developing technologies for maintaining and increasing nicotine levels as tar is reduced. FDA's investigation has also shown that tobacco manufacturers actually use a number of techniques to ensure that nicotine levels in marketed products do not fall below a certain level, such as incorporating high nicotine tobaccos to ensure "adequate" levels of nicotine and using chemical additives to enhance nicotine delivery.

Tobacco manufacturers have a sophisticated understanding of the nicotine levels in various types of tobacco and in the various parts of the tobacco plant. By monitoring nicotine levels in the tobacco they purchase and by blending the tobaccos in accordance with their nicotine levels, tobacco companies are able to manufacture tobacco products with nicotine levels that vary only minimally within cigarette packs and from pack to pack. See p. 271.

Officials at R.J. Reynolds and Brown and Williamson have confirmed the importance

¹² A number of techniques of cigarette production and manufacture can be used to lower nicotine levels. Probably the most significant technique is the design of low-tar cigarettes which lower nicotine levels when they lower tar levels. The filters that are used in 95% of cigarettes sold in the United States remove a certain amount of nicotine. The techniques described in FINDINGS § II.E., *infra*, are used by the tobacco industry to offset these reductions in nicotine levels and ensure that each cigarette delivers an amount of nicotine necessary to ensure consumer "satisfaction," <u>i.e.</u>, to provide an adequate dose of nicotine to produce desired pharmacological effects.