cigarette smoke and this is how ammonia can act as an impact booster. 445

Ammonia increases the pH of the smoke and thereby enhances the absorption of nicotine by the body. 446 FDA's investigation has revealed at least one common site for the application of ammonia and ammonia-like compounds: reconstituted tobacco. The agency has found levels of these compounds to be as high as 10 % in reconstituted tobacco.

The company handbook describes the benefits of the treated reconstituted tobacco as a source of ammonia to absorb nicotine from higher alkaloid-containing components in the blend.

This company handbook also describes the application of ammonia directly to the leaf tobacco.

With regard to the question of the efficiency of this technology in increasing nicotine delivery, the handbook states that smoke analysis shows that an experimental cigarette made of reconstituted tobacco treated with ammonia has almost double the nicotine transfer efficiency of tobacco. This handbook also states that many U.S. tobacco manufacturers utilize ammonia technology. One company has admitted to FDA that it uses DAP in manufacturing cigarettes, and that such use increases nicotine delivery.

(ii) Flavors and Casings

Various substances are added to tobacco components to affect the flavor and palatability of smoke, alter smoke composition and yield, modify burn rate, and alter pH to optimize nicotine

⁴⁴⁵ Id.

⁴⁴⁶ Surgeon General's Report. Nicotine Addiction. 1988. Pages 29-31.

⁴⁴⁷ See Statement of David A. Kessler, note 416, supra, at pp. 10-12.

⁴⁴⁸ See King and Spalding letter, note 403, supra, at p. 6.