

Technical Project Lead (TPL) Review:
SE0013978 - SE0013981

SE0013978: Basic Soft Pack	
Package Type	Soft Pack
Package Quantity	20 Cigarettes
Length	83 mm
Diameter	7.89 mm
Ventilation	0%
Characterizing Flavor	None
SE0013979: Marlboro 72's Box	
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	72 mm
Diameter	7.89 mm
Ventilation	15%
Characterizing Flavor	None
SE0013980: Marlboro 25's Box	
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	84 mm
Diameter	7.89 mm
Ventilation	15%
Characterizing Flavor	None
SE0013981: Basic Box	
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	83 mm
Diameter	7.89 mm
Ventilation	0%
Characterizing Flavor	None
Common Attributes of SE Reports	
Applicant	Philip Morris USA, Inc.
Report Type	Regular
Product Category	Cigarette
Product Sub-Category	Combusted Filtered
Recommendation	
Issue Substantially Equivalent (SE) orders.	

Technical Project Lead (TPL):

Matthew J. Walters -S
2018.01.31 14:08:54 -05'00'

Matthew J. Walters, Ph.D., MPH
CDR, US Public Health Service
Deputy Director
Division of Product Science

Signatory Decision:

- Concur with TPL recommendation and basis of recommendation
- Concur with TPL recommendation with additional comments (see separate memo)
- Do not concur with TPL recommendation (see separate memo)

Digitally signed by Matthew R. Holman -S
Date: 2018.01.31 14:36:55 -05'00'

Matthew R. Holman, Ph.D.
Director
Office of Science

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1. BACKGROUND

1.1. PREDICATE TOBACCO PRODUCTS

The applicant submitted the following predicate tobacco products:

SE0013978: Basic Soft Pack	
Product Name	Basic Full Flavor Box
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	83 mm
Diameter	7.89 mm
Ventilation	0%
Characterizing Flavor	None
SE0013979: Marlboro 72's Box	
Product Name	Marlboro Seventy-Twos Box
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	72 mm
Diameter	7.89 mm
Ventilation	15%
Characterizing Flavor	None
SE0013980: Marlboro 25's Box	
Product Name	Marlboro Box 25's
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	84 mm
Diameter	7.89 mm
Ventilation	15%
Characterizing Flavor	None
SE0013981: Basic Box	
Product Name	Basic Full Flavor Box
Package Type	Hard Pack
Package Quantity	20 Cigarettes
Length	83 mm
Diameter	7.89 mm
Ventilation	0%
Characterizing Flavor	None

The predicate tobacco products are combusted filtered cigarettes manufactured by the applicant.

1.2. REGULATORY ACTIVITY RELATED TO THIS REVIEW

On March 15, 2017, Philip Morris USA, Inc. submitted the SE Reports for the tobacco products listed above. FDA acknowledged the reports on March 22, 2017. FDA issued an Advice/Information (A/I) Request letter on June 6, 2017. On June 19, 2017, the applicant sent an email to FDA requesting reference cited in deficiency #9 within the A/I Request letter. FDA provided the reference on June 20, 2017. In response to the A/I Request letter, the applicant submitted an amendment (SE0014231) on August 4, 2017. On October 5, 2017, FDA issued a Preliminary Finding letter. In response, the applicant submitted an amendment (SE0014396) on November 2, 2017.

Product Name	SE Report	Amendments
Basic Soft Pack	SE0013978	SE0014231 SE0014396
Marlboro 72's Box	SE0013979	SE0014231 SE0014396
Marlboro 25's Box	SE0013980	SE0014231 SE0014396
Basic Box	SE0013981	SE0014231 SE0014396

1.3. SCOPE OF REVIEW

This review captures all regulatory, compliance, and scientific reviews completed for these SE Reports.

2. REGULATORY REVIEW

Acceptance reviews were completed by Pin Zhang on March 22, 2017.

The final reviews conclude that the SE Reports are administratively complete.

3. COMPLIANCE REVIEW

The Office of Compliance and Enforcement (OCE) completed reviews to determine whether the applicant established that the predicate tobacco products are grandfathered products (i.e., were commercially marketed as of February 15, 2007). The OCE reviews dated April 13, 2017, conclude that the evidence submitted by the applicant is adequate to demonstrate that the predicate tobacco products are grandfathered and, therefore, are eligible predicate tobacco products.

OCE also completed a review to determine whether the new tobacco products are in compliance with the Federal Food, Drug, and Cosmetic Act (FD&C Act) (see section 910(a)(2)(A)(i)(II) of the FD&C Act). The OCE review dated January 26, 2018, concludes that the new tobacco products are in compliance with the FD&C Act.

4. SCIENTIFIC REVIEW

Scientific reviews were completed by the Office of Science (OS) for the following disciplines:

4.1. CHEMISTRY

Chemistry reviews were completed by Caroline Agarabi on May 18, 2017, and September 19, 2017.

The final chemistry review concludes that the new tobacco products have different characteristics compared to the predicate tobacco products but the differences do not cause the new tobacco products to raise different questions of public health from a chemistry perspective. The review identified the following differences related to product composition:

- Ammonium hydroxide is lower by (b) (4) in all new tobacco products compared to the corresponding predicate products.
- (b) (4) is higher by (b) (4) in all new tobacco products compared to the corresponding predicate products.
- (b) (4) is lower by (b) (4) and other types of tobacco (b) (4) were either unchanged or lower (b) (4).
- The total tobacco weight difference for all new products was less than 1% compared to the corresponding predicate products.
- The new products incorporate an alternative banded cigarette paper from a new vendor.

The applicant has fully characterized the tobacco blend compositions and quantities between the new and predicate tobacco products. Additionally, the applicant has fully characterized the ingredients found in the new and predicate products with the only major difference in ingredients is a reduction of ammonium hydroxide between (b) (4), through there were minimal increases and decreases in other ingredients. These changes in the ingredient quantities do not cause the new products to raise different questions of public health. Additionally, the applicant provided HPHC yields for tar, nicotine, carbon monoxide, NNN, and NNK. All HPHCs showed either a reduction in smoke yields under the ISO and CI smoking regimens or minimal increases (b) (4). These differences do not cause the new product to raise different questions of public health. Therefore, the differences in characteristics between the new and corresponding predicate tobacco products do not cause the new tobacco products to raise different questions of public health related to product composition.

4.2. ENGINEERING

Engineering reviews were completed by Rashele Moore on May 30, 2017, September 20, 2017, and December 19, 2017.

The final engineering review¹ concludes that the new tobacco products have different characteristics related to product design compared to the corresponding predicate tobacco

¹ The final engineering review incorrectly cites SE001380; it should cite SE0013980.

products but the differences do not cause the new tobacco products to raise different questions of public health. The review identified the following differences related to product design:

- All SE Reports:
 - Increased cigarette paper band width by 5% or 9%.
- SE0013979 and SE0013980
 - Decreased cigarette paper band porosity by 56%
- SE0013979
 - Increased total denier by (b) (4)

The applicant provided the target specifications, range limits, and test data for key design parameters as well as provided a justification for increases in the cigarette band parameters. The applicant also provided test data, target specifications, and range limits for the design parameters as well as the individual data points for the test data. For SE0013979 and SE0013980, the applicant provided the target specification for band porosity in which the band porosity decreased 56% in comparison to the corresponding predicate products band. Using the band porosity provided, tobacco rod length, band width and substrate permeability, the applicant calculated the weighted cigarette permeability to show that the differences in band width and band porosity do not raise different questions of public health. Additionally, the HPHC yields provided by the applicant demonstrate that these design parameters do not result in major differences in the HPHC yields between the new and predicate tobacco products. Therefore, the differences in characteristics between the new and corresponding predicate tobacco products do not cause the new tobacco products to raise different questions of public health related to product design.

4.3. TOXICOLOGY

Toxicology reviews were completed by Prince Awuah on May 24, 2017, and September 26, 2017.

The final toxicology review concludes that the new tobacco products have different characteristics related to toxicology compared to the corresponding predicate tobacco products but the differences do not cause the new tobacco products to raise different questions of public health. The review identified the following differences related to toxicology:

- The TNCO values measured under CI conditions, along with CFM TNCO values, indicate CO is not significantly increased in the new products compared to the corresponding predicate or surrogate predicate products.
- The CO, NNN, NNK, acetaldehyde, acrolein, and formaldehyde yields for the new and corresponding predicate or surrogate predicate products and none of these HPHCs are analytically increased in the new products, indicating that the increase in (b) (4) and ingredients (e.g., glycerol, fenugreek, cocoa nibs, and cigarette side seam adhesive and paper ingredients) do not cause the new products to raise different questions of public health.

The applicant has fully characterized the tobacco blend compositions and quantities between the new and predicate tobacco products. Additionally, the applicant has fully characterized the

ingredients found in the new and predicate products with the only major difference in ingredients is a reduction of ammonium hydroxide between (b) (4) through there were minimal increases and decreases in other ingredients. These changes in the ingredient quantities do not cause the new products to raise different questions of public health. The applicant noted that the organic solvents in the tipping paper inks (ethyl alcohol, ethyl acetate, isopropyl alcohol, and propyl acetate) are left in residual amounts after drying, which would be consistent with the volatile nature of these solvents, however, given that the tipping paper is not combusted, consumer exposure to residual levels of the volatile organic solvents is not a toxicological concern. Additionally, the applicant provided HPHC yields for tar, nicotine, carbon monoxide, NNN, and NNK. All HPHCs showed either a reduction in smoke yields under the ISO and CI smoking regimens or minimally increases (b) (4). Therefore, the differences in characteristics between the new and corresponding predicate tobacco products do not cause the new tobacco products to raise different questions of public health related to toxicology.

5. ENVIRONMENTAL DECISION

A finding of no significant impact (FONSI) was signed by Kimberly Benson, Ph.D. on January 31, 2018. The FONSI was supported by an environmental assessment prepared by FDA on January 31, 2018.

6. CONCLUSION AND RECOMMENDATION

The following are the differences in characteristics between the new and predicate tobacco products:

- Ammonium hydroxide is lower by (b) (4) in all new tobacco products compared to the corresponding predicate products.
- (b) (4) is higher by (b) (4) in all new tobacco products compared to the corresponding predicate products.
- (b) (4) is lower by (b) (4) and other types of tobacco (e.g., (b) (4)) were either unchanged or lower (b) (4).
- The total tobacco weight difference for all new products was less than 1% compared to the corresponding predicate products.
- The new products incorporate an alternative banded cigarette paper from a new vendor.
- Reduction or minimal increases in the HPHC yields of CO, NNN, NNK, acetaldehyde, acrolein, and formaldehyde.
- Increased cigarette paper band width by 5% or 9%.
- Decreased cigarette paper band porosity by 56% (SE0013979 and SE0013980 only).
- Increased total denier by (b) (4) (SE0013979 only).
- Ingredients in cigarette side seam adhesive and paper are added or increased including glycerol, fenugreek, and cocoa nibs.

The applicant has demonstrated that these differences in characteristics do not cause the new tobacco products to raise different questions of public health. The applicant has fully characterized the tobacco blend compositions and quantities between the new and predicate tobacco products. The new tobacco products resulted in changes in the tobacco blend (b) (4) compared to

the predicate tobacco product, however the overall tobacco weight change was minimal between the new and predicate product. Additionally, the applicant provided HPHC yields for tar, nicotine, carbon monoxide, NNN, NNK, acetaldehyde, acrolein, and formaldehyde. All HPHCs showed either a reduction in smoke yields under the ISO and CI smoking regimens or minimal increases [REDACTED] in new products which indicates that the change in the tobacco blend had minimal effects on the HPHC yields and does not cause the new products to raise different questions of public health. The applicant has fully characterized the ingredients found in the new and predicate products with the only major difference in ingredients is a reduction of ammonium hydroxide between [REDACTED], through there were minimal increases and decreases in other ingredients. These changes in the ingredient quantities do not cause the new products to raise different questions of public health. The applicant noted that the organic solvents in the tipping paper inks (ethyl alcohol, ethyl acetate, isopropyl alcohol, and propyl acetate) are left in residual amounts after drying, which would be consistent with the volatile nature of these solvents, however, given that the tipping paper is not combusted, consumer exposure to residual levels of the volatile organic solvents is not a toxicological concern. Additionally, as mentioned above, the applicant provided HPHC yields for tar, nicotine, carbon monoxide, NNN, NNK, acetaldehyde, acrolein, and formaldehyde. All HPHCs showed either a reduction in smoke yields under the ISO and CI smoking regimens or minimally increases [REDACTED] in new products. The applicant provided the target specifications, range limits, and test data for key design parameters as well as provided a justification for increases in the cigarette band parameters in new products. As demonstrated by the applicant, the HPHC yields show that these design parameters do not result in major differences in the HPHC yields between the new and predicate tobacco products. There is a stated change in container closure system from hard pack to soft pack for SE0013978; however, this change does not affect the characteristics of the consumable portion of the tobacco product and, therefore, does not cause the new tobacco product to raise different questions of public health. Therefore, the differences in characteristics between the new and corresponding predicate products do not cause the new tobacco products to raise different questions of public health.

The predicate tobacco products meet statutory requirements because they are grandfathered products (i.e., were commercially marketed in the United States as of February 15, 2007).

The new tobacco products are currently in compliance with the FD&C Act. In addition, all of the scientific reviews conclude that the differences between the new and corresponding predicate tobacco products are such that the new tobacco products do not raise different questions of public health. I concur with these reviews and recommend that SE order letters be issued.

FDA examined the environmental effects of finding these new tobacco products substantially equivalent and made a finding of no significant impact.

SE order letters should be issued for the new tobacco products in SE0013978 – SE0013981, as identified on the cover page of this review.