

**Programmatic Environmental Assessment for Market
Authorizations of Multiple Cigarette Products Marketed by
Philip Morris, USA Inc.**

**Prepared by Center for Tobacco Products US Food and Drug
Administration**

November 24, 2015

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This programmatic environmental assessment (PEA) is for market authorizations of multiple cigarette products listed in **Error! Reference source not found.** Information presented in the PEA is based on the submissions referenced in Appendix 1, unless noted or referenced otherwise. This PEA has been prepared in accordance with 21 CFR 25.40 in support of the market authorizations under section 905(j) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) under section 905(j) of the Federal Food, Drug, and Cosmetic Act (FD&C Act).

1. Name of Applicant

Altria Client Services Inc.

2. Address

3601 Commerce Rd, Richmond, Virginia 23234

3. Manufacturer

Philip Morris USA Inc.

4. Description of the Proposed Action

The proposed action is to issue a market authorization under section 910(a)(2) of the FD&C Act for introducing new cigarette products listed in Table 1 into interstate commerce. The agency has found the new products to be “Substantially Equivalent” to products that were on the market as of February 15, 2007, “predicate products”, listed in Appendix 1.

4.1. Identification of the New Tobacco Products that are Subjects of the Proposed Action

4.1.1. Type of Tobacco Product

Conventional filtered cigarettes

4.1.2. Trade Name and UPC Number of Tobacco Products:

Names and UPC code of the new products in **Table 1** .

Table 1 Product UPC Numbers

STNs	New Products
SE0012332	Basic Blue Pack Box
SE0012333	Basic Blue Pack Soft Pack
SE0012334	Basic Gold Pack 100s Box
SE0012335	Basic Gold Pack Box
SE0012336	Basic Gold Pack 100s Soft Pack
SE0012337	Basic Gold Soft Pack
SE0012338	Basic Menthol Box
SE0012339	Basic Menthol Gold Pack Soft Pack
SE0012340	Basic Menthol Box Soft Pack
SE0012341	Basic Menthol Silver Pack
SE0012342	Cambridge Gold Pack 100s Soft Pack
SE0012343	Cambridge Gold Pack King Soft Pack
SE0012344	L&M Blue Pack 100s Box

SE0012345	L&M Blue Pack Box
SE0012346	Marlboro 72's Gold Pack Box
SE0012347	L&M Bold Box
SE0012348	Marlboro Gold Pack 100s Box
SE0012349	Marlboro Gold Pack 100s Soft Pack
SE0012350	Marlboro Silver Pack 100s Box
SE0012351	Marlboro Silver Pack Box
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box
SE0012353	Basic Menthol Gold Pack Box
SE0012356	Dave's Blue Pack Box

4.1.3. Description of the Product Package

4.1.4. Requested Action

Orders finding the listed tobacco products substantially equivalent to the respective predicate products.

4.1.5. Need for Action

Altria Client Services Inc. wishes to introduce into interstate commerce for commercial distribution in the United States (US) new cigarettes that FDA has found substantially equivalent to the predicate products, which were commercially marketed in the United States as of February 15, 2007 and therefore, are grandfathered tobacco products. The agency issued determination letters that the predicate products qualify for grandfathered status and are not subject to the premarket review requirements set forth in section 910(a)(2) of the FD & C Act. Altria Client Services Inc. also claims that these new products are currently marketed provisional products with an alternate cigarette paper from a different vendor. The respective new and currently marketed provisional products have the same names, with different STNs for the each product.

A list of the new products, their predicate grandfathered products, and their provisional products with associated STNs are provided in Appendix 1.

4.1.6. Location of Manufacturing

Philip Morris USA Manufacturing Center
 FEI – 3008255477
 3601 Commerce Road
 Chesterfield County
 Richmond, Virginia 23234

4.1.7. Location of Use

Philip Morris USA Inc. intends to distribute and sell the new cigarettes to consumers in the U.S.

4.1.8. Location of Disposal

Disposal of the used new tobacco products will be through deposit in municipal solid

waste landfills or as litter, in the same manner as any other marketed cigarettes. The distribution of waste from disposal after use should correspond to the pattern of product use.

4.2. Modification(s) Identified as Compared to the Predicate Products:

Philip Morris USA Inc. is making multiple changes from the predicate products to its new products, as listed in the confidential appendix.

The applicant stated that “the Predicate Products are not currently on the market.”

5. Environmental Introduction Due to the Proposed Action

5.1. Environmental Introduction as a Result of Manufacture

5.1.1 Existing condition

A) *Tobacco Manufacture* - As of February 2014, a total of seventy-three tobacco production establishments are registered under 915(c) of the FD&C Act. These manufacturers produced cumulatively 1,003.58 million pounds (501,788 tons) of tobacco products and 580.62 million pounds of cigarettes (292.63 billion cigarettes or 14.63 billion packs of 20 cigarettes each) in 2013.^{1 2} As of March 2014, there are 29 different tobacco manufacturers registered in the State of Virginia³, including PM USA.

B) *PM USA’s toxic substance reporting*- PM USA is required to submit amounts of toxic substances released (under Emergency Planning and Community Right-to-Know Act⁴ and management of the substance released under Pollution Prevention Act⁵) to

¹ The calculated cumulative tobacco products includes cigarettes, large cigars, cigarillos, pipe, snuff, and chewing tobacco, assuming that each cigarette or cigarillo contains 0.9 grams tobacco and the large cigar 14.175 grams (a half ounce equivalent) based on information on the American Cancer Society website.(Cigar smoking. Available at <http://www.cancer.org/acs/groups/cid/documents/webcontent/002965-pdf.pdf>. Accessed May19, 2014.)

² Department of the Treasury Alcohol and Tobacco Tax and Trade Bureau: Statistical Report – Tobacco for December 2013. Issued February 2014. Available at: <http://www.ttb.gov/statistics/2013/201312tobacco.pdf>. Accessed on May 19, 2014.

³ Virginia.gov. Tobacco Product Manufacturer Requirements and Resources: Virginia Tobacco Directory. Available at: http://www.ag.virginia.gov/Opinions%20and%20Legal%20Resources/Tobacco/VA_Directory/. Accessed May 20, 2014.

⁴ US EPA. Learn about Your Right to Know. <http://www.epa.gov/epahome/r2k.htm>

⁵ “Under the Pollution Prevention Act of 1990 (PPA), the Toxics Release Inventory (TRI) collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. When providing this information, many facilities choose to describe the measures they have taken to prevent pollution and reduce the amount of toxic chemicals entering the environment. The waste management hierarchy established by the PPA guides waste generators toward the best options for managing wastes. The preferred option is to prevent pollution at its source, but for waste that is generated, the preferred management methods are recycling, followed by burning for energy recovery, treatment and, as a last resort, disposing of the waste.

- Source Reduction includes activities that eliminate or reduce the generation of chemical waste.

the Environmental Protection Agency (EPA) during the manufacturing of their products. This information is submitted in a Toxic Release Inventory report.^{6, 7 8 9} Air emission, Publicly Owned Treatment Works (POTW) transfer, and recycle, recovery and landfills are considered using the information from PM USA's TRI report as below.

1. *PM USA's ammonia, hydrochloric acid, lead compounds, mercury compounds, nicotine, and zinc compounds emitted to the air.* PM USA reported chemicals (as described) released to the air from their manufacturing facility. The chemicals, the amounts, and how they are released to the environmental pathways from this facility, as reported in 2012, are shown in **Table 2**:

Table 2 PM USA's ammonia, hydrochloric acid, lead compounds, mercury compounds, nicotine, and zinc compounds emitted to the air

Chemicals and Their Environmental Introduction	Pounds
Ammonia fugitive or non-point air emissions	195
Ammonia stack or point air emissions	194,97
Hydrochloric acid stack or point air emissions	110,625
Lead compounds fugitive or non-point air emissions	9
Lead compounds stack or point air emissions	12
Lead compounds disposed of off-site	Not reported
Lead compounds to POTW	0
Mercury compounds air stack	9.4
Nicotine and salts air fugitive non-point air emissions	127
Nicotine and salts air stack or point air emissions	12,694
Zinc compounds air fugitive non-point air emissions	15
Zinc compounds air stack or point air emissions	390,706
Total	533,890

-
- Recycling includes the recovery of a toxic chemical in waste for reuse.
 - Energy Recovery includes the combustion of toxic chemicals in waste to generate heat or electricity.
 - Treatment includes the destruction of a toxic chemical in waste.
 - Disposal or Other Releases includes toxic chemical quantities entering the environment.”

⁶ U.S. Environmental Protection Agency (EPA). Toxics Release Inventory (TRI). Available at: http://www.epa.gov/enviro/facts/tri/form_ra_download.html. Accessed May 20, 2014.

⁷ The EPA TRI is a database that allows users to retrieve information on toxic chemicals handled by many facilities across the US, including details on quantities of chemicals managed through disposal or other release, recycling, energy recovery or treatment. Data associated with tobacco manufacture industry is retrieved by using North American Industry Classification System (NAICS) codes beginning with 3122. Available at: <http://www2.epa.gov/toxics-release-inventory-tri-program/learn-about-toxics-release-inventory>. Accessed May 22, 2014.

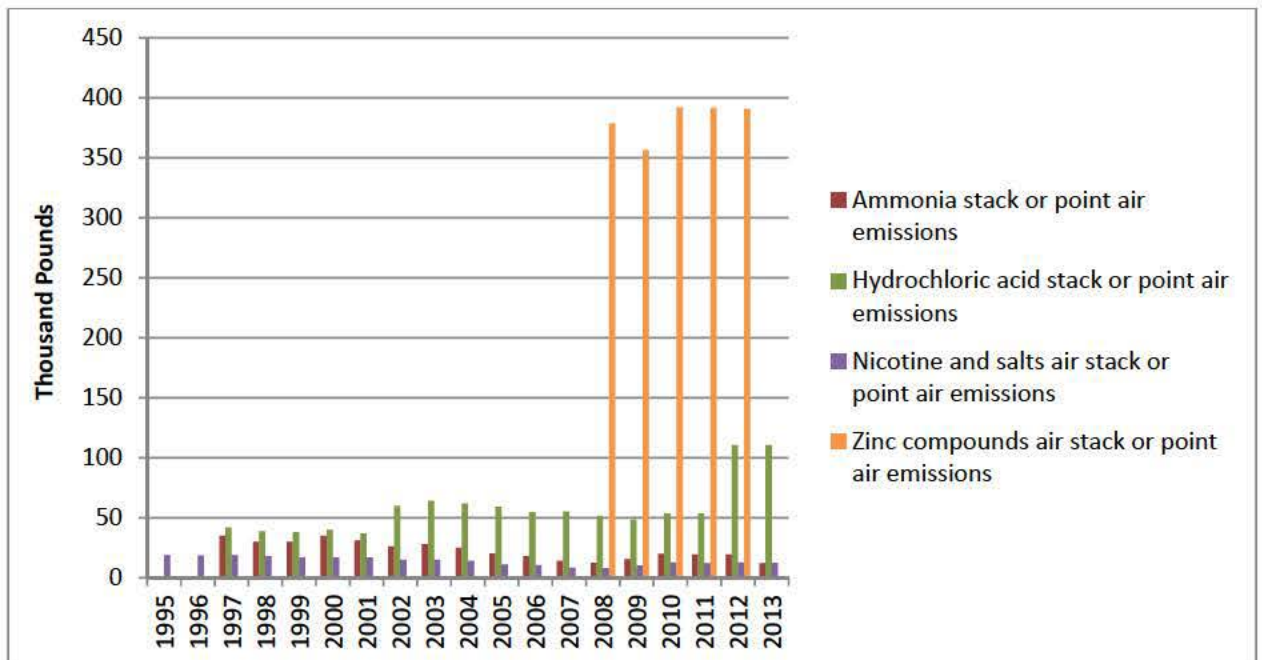
⁸ The EPA's Toxic substance release inventory (TRI) database only includes toxic release data of facilities that (1) fall within a TRI-reportable industry sector or federally-owned or operated; (2) has 10 or more full-time (or equivalent) employees; and (3) manufactures, processes or otherwise uses (MPOU) a TRI-listed chemical in an amount above the TRI reporting threshold during a calendar year.

⁹ http://iaspub.epa.gov/enviro/tris_control.tris_print?tris_id=23234PHLLP3601C

Based on the reports, this facility emitted 390,706 pounds of zinc compounds as air stack or point air emission, 19,497 pounds of ammonia as stack or point air emission, 12,694 pounds of nicotine and its salts as air stack or point air emission, and 110,625 pounds of hydrochloric acid as stack or point air emission. This facility emitted 533,890 pounds of the reported chemicals in 2012.

PM USA also reported amounts of chemicals released from 1993 to 2013 (**Figure 1**; Not all listed compounds were reported in a given year). PM USA reported the amount of nicotine released to the air from 1993 to 2013 with a range from 8,022 pounds in 1995 to 190,000 pounds in 2013 from air stack or point air emissions. The highest amount of toxic release reported is zinc compounds from air stack or point air emissions at a level of 391,901 pounds in 2010.

Figure 1 Chemicals Emitted to Air from the Manufacture Facility of PM USA



On the other hand, in 2013, all TRI reportable facilities in VA (427 facilities in total) emitted 23,297,261 pounds of chemicals into the air (Virginia accounted for 1.12% of total TRI releases nationwide in 2013)¹⁰ and twenty-one TRI reportable facilities in Chesterfield County emitted 2,624,735 pounds of chemicals into the air (Chesterfield County, VA accounted for 8.23% of total TRI releases in Virginia).¹¹ PM USA accounts for 0.02% of chemical released into the air in the US, 2% in the VA, and 20% in Chesterfield County.

2. *PM USA's nicotine and ammonia transferred to POTW.* PM USA transferred ammonia and nicotine and its salts to the POTW, City of Richmond Department of Public Utilities located at 1400 Branders Street, Richmond, VA 23224. This POTW can treat up to 70 million gallons a day of sanitary sewage and stormwater before returning it to the James River.¹² The POTW uses a Combined Sewer Overflow (CSO) to discharge untreated storm and wastewater from a combined sewer into the environment. CSOs typically occur when combined sewers fill up with too much water for the system to handle, most often during heavy rains, and the excess water is released into a stream or river.¹³

¹⁰2013 TRI Analysis: State – Virginia, EPA.

http://iaspub.epa.gov/triexplorer/tri_factsheet.factsheet_forstate?pyear=2013&pDataSet=TRIQ1&pstate=VA
(Accessed on 1/19/2015)

¹¹ 2013 TRI Analysis: County – Chesterfield, VA

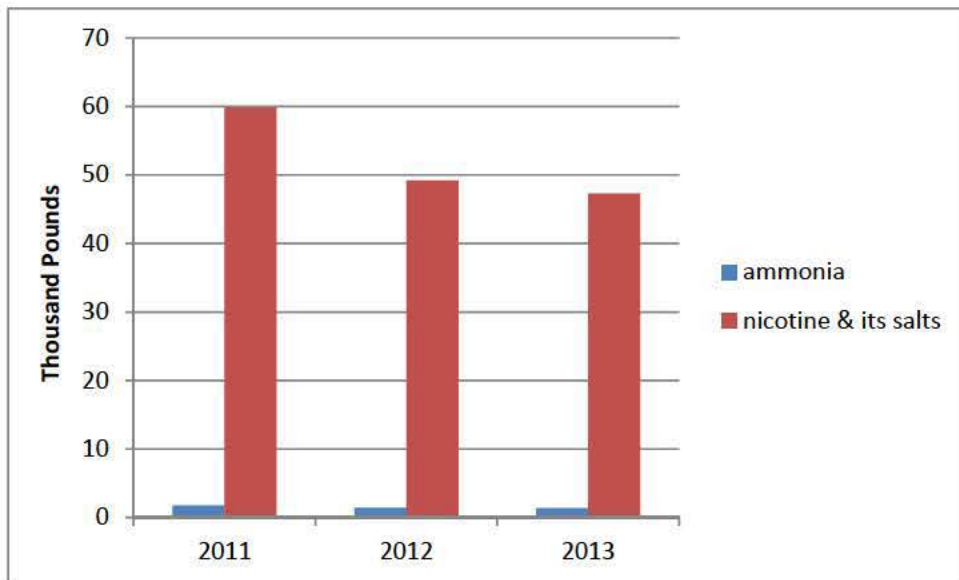
http://iaspub.epa.gov/triexplorer/tri_factsheet.factsheet?pyear=2013&pDataSet=TRIQ1&pstate=VA&pcounty=Chesterfield (Accessed on 1/19/2015)

¹² <http://www.richmondgov.com/PublicUtilities/WastewaterTreatmentCollection.aspx>

¹³ <http://www.richmondgov.com/PublicUtilities/projectCombinedSewerOverflow.aspx>

In 2013, PM USA transferred 1,390 pounds of ammonia and 47,290 pounds of nicotine and its salts to the POTW (**Figure 2**). In the event of heavy rain, the ammonia and nicotine and its salts might enter the environment without further treatment. In Richmond, the major overflow points are found on the banks of the James River and Gillies Creek.

Figure 2 Chemicals Transferred from PM USA to the POTW from 2011 to 2013



3. *PM USA's TRI Report- recycle.* In addition to chemicals emitted to the air and transferred to POTW, PM USA transferred ammonia, lead compounds, nicotine and its salts, to McGill Environmental Systems at 5056 Beefsteak Road, Waverly, VA 23890 in 2013 for recycling (**Table 3**).

Table 3 Chemicals that PM USA Transfers to McGill Environmental Systems for recycling in 2013

Chemical Name	Total Transfer Amount (Pounds)
AMMONIA	5
LEAD COMPOUNDS	715
NICOTINE AND SALTS	126,400

C) PM USA's Production Related Waste Management for Nicotine- From 2012 to 2014, this facility generated about 300,000 pounds of nicotine yearly, about 0 to 0.3% of the nicotine is landfilled, 4 to 20% of the nicotine is released to the environment, 37 to 49% is recycled, and 46 to 59% is treated. (

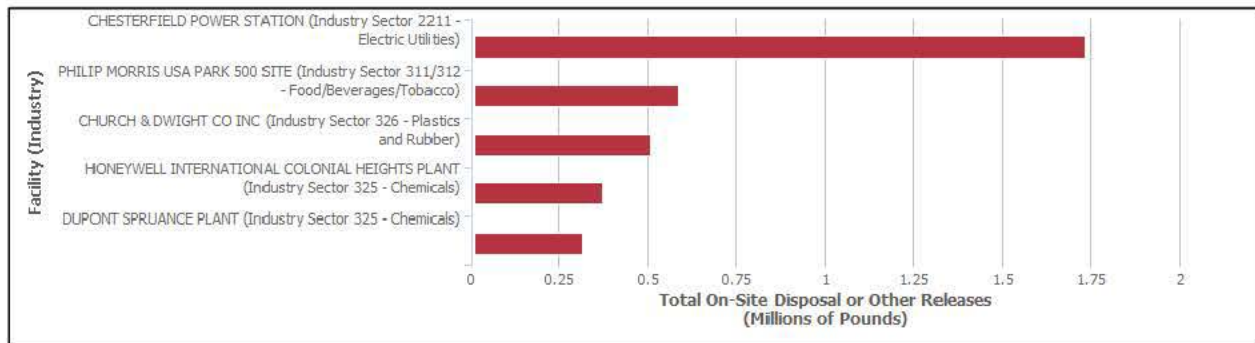
Table 4).

Table 4 PM USA's Production Related Waste Management for Nicotine

Waste Management	TYPE OF QUANTITY	2012 (in pounds; percent of total released nicotine)	2013 (in pounds; percent of total released nicotine)	2014 (in pounds; percent of total released nicotine)
Landfills	Total off-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	0 (0%)	946 (0.3%)	950 (0.3%)
	Total other on-site disposal or other releases	12,821 (4%)	12,605 (4%)	12,700 (0.5%)
Released to the environment	Total other off-site disposal or other releases	0 (0%)	46,344 (15%)	46,000 (18%)
	Quantity Used for Energy Recovery Onsite	Not available	Not available	Not available
Recovery for energy use	Quantity Used for Energy Recovery Offsite	Not available	Not available	Not available
	Quantity Recycled Onsite	Not available	Not available	Not available
Recycled	Quantity Recycled Offsite	105,113 (37%)	126,400 (42%)	125,000 (49%)
	Quantity Treated Onsite	120,512 (42%)	116,300 (38%)	116,000 (46%)
Treated	Quantity Treated Offsite	49,191 (17%)	0 (0%)	0 (0%)
	Total	287,637 (100%)	302,595 (100%)	300,650 (100%)

D) *Overall Chemical Release and Disease Risk.* In Chesterfield County, the PM USA facility releases the second highest amount of chemicals to the environment. Chesterfield Power station releases the most among all TRI reportable facilities in the county (Figure 3).¹⁴

Figure 3 Top Five TRI Reportable Facilities at Chesterfield County, VA, 2013 (adapted from EPA’s 2013 TRI Analysis: County – Chesterfield, VA)



5.1.2 Environmental effects as a result of manufacturing due to the proposed action

The agency anticipates that toxics generated as a result of manufacturing the tobacco products to be released to the environment, or transferred to the POTW and landfills in the same manner as those generated from the manufacturing of other products in the same facility and from other tobacco manufacturing industries. The applicant stated that, “the new products are currently marketed provisional products with an alternate cigarette paper from a different vendor. When manufactured and distributed the New Products will substitute/replace the currently marketed provisional products and will not cause a change to the projected market volumes shown in.” Therefore, the introduction of the new product is not expected to significantly affect the current manufacturing emission from cigarette production.

5.2. Environmental Introduction as a Result of Use

5.2.1. Existing condition as a result of use of the new products

Total consumption of cigarettes continued to decline and was estimated at 292 billion cigarettes in 2014 as compared to 2004 at 499 billions.¹⁵

¹⁴ 2013 TRI Analysis: County – Chesterfield, VA http://iaspub.epa.gov/triexplorer/tri_factsheet.factsheet?pyear=2013&pDataSet=TRIQ1&pstate=VA&pcounty=Chesterfield (Accessed on 1/19/2015)

¹⁵ Department of the Treasury Alcohol and Tobacco Tax and Trade Bureau: Statistical Report – Tobacco for

When using cigarettes, the users inhale the main stream smoke and they also release tobacco specific nitrosamines through excretion into the water.¹⁶ Cigarette users also release environmental tobacco smoke (secondhand smoke) to the environment. Secondhand smoke (SHS) is classified as a “known human carcinogen” by EPA, the US National Toxicology Program, and the International Agency for Research on Cancer (IARC – a branch of the World Health Organization (WHO))¹⁷. Tobacco smoke contains more than 7,000 chemical compounds; many are known to be harmful, with at least 69 known or probable carcinogens and at least 5 reproductive or developmental toxins, including: lead, nicotine, carbon monoxide, and toluene. SHS has been linked to lung cancer with some evidence suggesting it might be linked to other forms of cancer in children and cancers of the larynx, pharynx (throat), nasal sinuses, brain, bladder, rectum, stomach, and breast in adults.¹⁸ About 40 percent of all children are regularly exposed to SHS at home, and almost a third of the deaths attributable to SHS are in children.¹⁹ A recent study found SHS led to a thickening of children's artery walls, adding some 3.3 years to the age of blood vessels by adulthood.²⁰

5.2.2. Environmental introduction as a result of use due to the proposed action

As noted, the new products are currently marketed provisional products with an alternate cigarette paper from a different vendor. Therefore, no new materials are anticipated to be released into the environment as a result of the use of the products. The environmental effects of the use of these products is negligible compared to that of all tobacco products consumed (used) in the US.

5.3. Environmental Introduction as a Result of Disposal after Use

The waste products of cigarette consumption consist of cigarette butts (filters), packages, cellophane wrappers, and cartons. Although the paper and tobacco components are biodegradable, the filters and plastic wrappers are retained in the environment for a long time.²¹

December 2013. Issued February 2014. Available at: <http://www.ttb.gov/statistics/2013/201312tobacco.pdf>. Accessed on May 22, 2014.

¹⁶ Andra S and Makris KC. Tobacco-specific nitrosamines in water: An unexplored environmental health risk. *Environmental International*. 2011; 37(2):412-417.

¹⁷ International Agency for Research on Cancer (IARC). Second-Hand Tobacco Smoke Monograph. Available at: <http://monographs.iarc.fr/ENG/Monographs/vol100E/mono100E-7.pdf>. Accessed May 20, 2014.

¹⁸ EPA. Health effects of exposure to second hand smoke. Available at: <http://www.epa.gov/smokefree/healtheffects.html>. Accessed May 20, 2014

¹⁹ World Health Organization (WHO). Tobacco Facts Sheet. July 2013. Available at: <http://www.who.int/mediacentre/factsheets/fs339/en/>. Accessed May 20, 2014

²⁰ Gall S, Huynh QH, Magnussen GC, Juonala M, Viikari J S-A, Kähönen M, Dwyer T, Raitakari OT, and Venn A. Exposure to parental smoking in childhood or adolescence is associated with increased carotid intima-media thickness in young adults: Evidence from the cardiovascular risk in young Finns study and the childhood determinants of adult health study. *European Heart Journal*. Advance Access May 20, 2014.

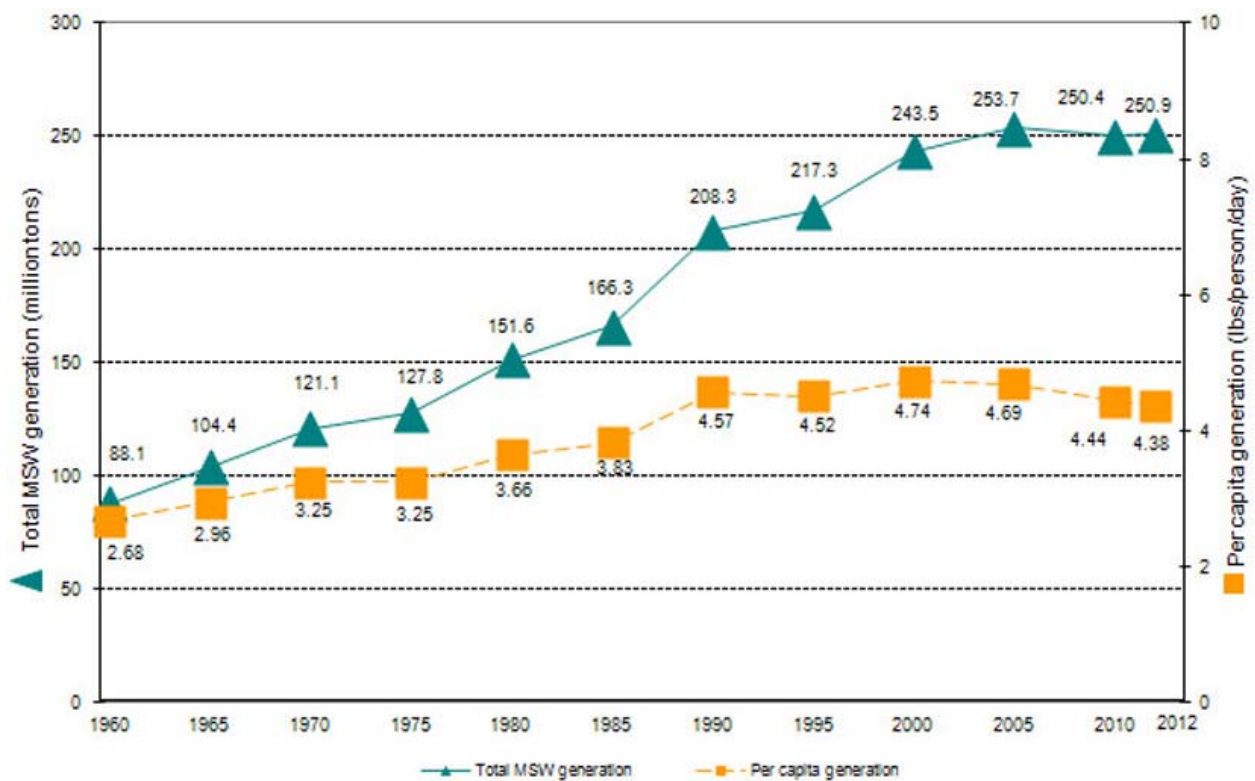
²¹ Novotny TE and Zhao F. Consumption and production waste: Another externality of tobacco use. Tobacco

5.3.1. Existing condition as result of disposal following use by consumers

a) Disposal of packaging material:

In 2012, the amount of trash generated in the U.S. was approximately 251 million tons and approximately 87 million tons of this material was recycled and composted, equivalent to a 34.5 percent recycling rate (Figure 1 and Figure 2). The recovery of newspaper/mechanical papers was about 70 percent (5.9 million tons) and that for polypropylene waste was 30.8%. On average, 4.38 pounds of trash per person per day was generated, of which 1.51 pounds was recycled and composted in the U.S. in 2012.²²

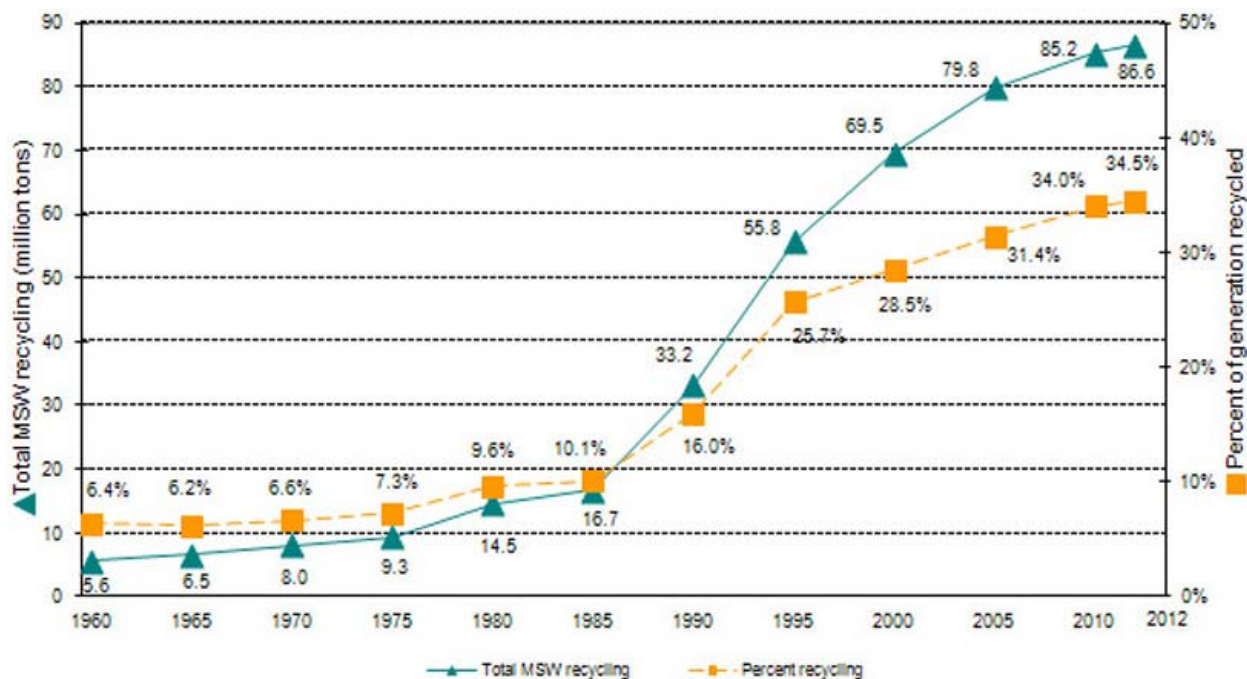
Figure 4 Municipal Solid Waste (MSW) Generation Rates in the U.S, 1960 – 2012



Control 1999;8:75-80.

²² EPA. Wastes - Non-Hazardous Waste - Municipal Solid Waste. Available at: <http://www.epa.gov/waste/nonhaz/municipal/>. Accessed May 23, 2014.

Figure 5 MSW Recycling Rates in the U.S.



b) Disposal of cigarette butts following use

A major existing environmental consequence of cigarette use is the waste disposal of discarded cigarette filters, as an estimated 4.5 trillion cigarette butts are thrown away every year worldwide and 1.69 billion pounds of cigarette butts wind up as toxic trash each year.²³ Evidence has shown that cigarette butts are the most prevalent items discarded in urban area roads and streets. Once dumped onto city streets, they move through the storm drains to streams, into the ocean, and back onto the beaches, while leaching toxicants into the environment along the way. Discarded cigarette filters are found to be the most collected item in beach clean-ups and litter surveys. An estimated 30 percent of the total waste (by count) on U.S. shorelines, waterways and land is cigarette waste.²⁵

Cigarette filters most commonly contain cellulose acetate and may persist under normal environmental conditions for 18 months to 10 years.^{26 27} Cigarette filters were found to be a

²³ Novotny TE, Hardin SN, Hovda LR, Novonty DJ, McLean MK, Khan S. Tobacco and Cigarette Butt Consumption in Humans and Animals. *Tobacco Control* 2011;20(Suppl. 1):i17-i20. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088460/>. Accessed May 22, 2014.

²⁴ Smith, EA and Novotny, TE. Whose butt is it? Tobacco industry research about smokers and cigarette butt waste. *Tobacco Control* 2011;20(Suppl. 1):i2-i9.

²⁵ Tobacco Control Legal Consortium. Policy Tools for Minimizing Public Health and Environmental Effects of Cigarette Waste. March 2014. Available at: <http://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-cigarette-waste-2014.pdf>. Accessed May 22, 2014.

²⁶ US Department of Health and Human Services. Reducing the health consequences of smoking: 25 years of progress. A report of the Surgeon General, 1989. Rockville, Maryland: Public Health Service, Centers for Disease

point source for metal contamination, based on a study conducted to assess the gradual release of multiple metals from the cigarette filter over the full 34-day study period.²⁸

5.3.2. Environmental introduction as a result of disposal from use due to the proposed action

After using the new product, the users may dispose of or recycle the packaging paper material. Users may also discard the cigarette butts and ashes as municipal solid waste (MSW) or as litter.

a) Disposal of packaging material:

The new products are currently marketed provisional products with an alternate cigarette paper from a different vendor. To determine the amount of waste from disposal of paper packaging material, the agency used the 1st year and 5th year projected volume of marketing the new products. The calculated cumulative waste of foil and polypropylene wrap is negligible compared to the amount of municipal solid waste generated in 2012 (as noted in the Confidential Appendix). Likewise, the waste generated from the paper packaging material is minute compared to the total municipal solid waste; it is also likely to be recycled.

b) Disposal of cigarette butts:

As discussed, the new products are currently marketed provisional products with an alternate cigarette paper from a different vendor. The amount of cigarette butts generated would not change noticeably as the new products and the currently marketed provisional products would be consumed interchangeably. Therefore, the anticipated release of substances into the environment as a result of disposal of the products is minuscule compared to that of cigarettes in the U.S.

6. Fate of New Materials Released into the Environment Due to the Proposed Action

No new chemicals are anticipated to be released into the environment due to the proposed action because the new products have a substitution of a certain ingredient that is commonly used in this and other industries.

7. Environmental Effects of the New Products

Because the amount of materials anticipated to enter the environment due to the proposed action is minuscule, if any, the environmental effects of the materials are negligible compared to those of marketed

Control, Office on Smoking and Health, 1989. (DHHS Publication No (CDC) 89-8411.).

²⁷ Ach A. Biodegradable plastics based on cellulose acetate. *Journal of Macromolecular Science: Pure and Applied Chemistry* 1993;A30:733–40.

²⁸ Moerman, JW; Potts, GE. Analysis of metals leached from smoked cigarette litter. *Tobacco Control*. 2011;20(Suppl. 1):I30-I35.

8. Use of resources and energy

The new products are anticipated to replace the predicate products and compete with the other tobacco products currently on the market, as noted. Furthermore, the market volumes of the new products are a negligible fraction of that of all tobacco products in the U.S., based on 2013 data. Accordingly, the use of resources and energy due to the proposed action is negligible.

9. Mitigation

No adverse environmental effects are identified based upon review of the available data and information for the new products and their proposed use. Therefore, no mitigation measures are to be discussed.

10. Alternatives to the Proposed Action

Alternative A (No action alternative): The no-action alternative is to not allow the tobacco products to be marketed in the U.S. The environmental impact of this action would not change the existing condition due to the manufacture, use, and disposal from use of tobacco products.

Alternative B (Proposed action): There is virtually no environmental effect due to the proposed action of authorizing the new products and the associated manufacture, use, and disposal from use of the new tobacco products.

Therefore, the difference between the environmental impacts of these two alternatives is negligible, or non-existent.

11. List of Preparer

In accordance with 40 CFR § 1502.17, this section includes a list of names and qualifications (including position/title, education, experience, and expertise) of individuals who were primarily responsible for preparing this PEA.

Hoshing Wan Chang, Ph.D., Center for Tobacco Products

Education: M.Sc. in Environmental Science and Ph.D. in Biochemistry

Experience: 12 years in various scientific activities

Expertise: NEPA Analysis

12. Appendix List

Appendix 1: List of SE Reports and Related Amendments that are Covered Under this Programmatic Environmental Assessment (PEA)

Appendix 2: List of Submissions by Number, Name and UPC of New Products.

13. Confidential Appendix

Confidential Appendix 1: Modifications in the New Products Compared to the Grandfathered Predicate Product for Ingredients Other than Tobacco

Confidential Appendix 2: Projected Market Volumes

Confidential Appendix 3: Estimated Projections of Waste Associated with Marketing the New Products in 2015 and 2020

APPENDIX 1

List of SE Reports and Related Amendments that are Covered Under this Programmatic Environmental Assessment (PEA)

STNs	New Products	Amendments
SE0012332	Basic Blue Pack Box	SE0012523 SE0012604
SE0012333	Basic Blue Pack Soft Pack	SE0012522 SE0012603
SE0012334	Basic Gold Pack 100s Box	SE0012524 SE0012606
SE0012335	Basic Gold Pack Box	SE0012526 SE0012605
SE0012336	Basic Gold Pack 100s Soft Pack	SE0012528 SE0012607
SE0012337	Basic Gold Soft Pack	SE0012527 SE0012609
SE0012338	Basic Menthol Box	SE0012525 SE0012608
SE0012339	Basic Menthol Gold Pack Soft Pack	SE0012532 SE0012612
SE0012340	Basic Menthol Box Soft Pack	SE0012542 SE0012543 SE0012624
SE0012341	Basic Menthol Silver Pack	SE0012530 SE0012610
SE0012342	Cambridge Gold Pack 100s Soft Pack	SE0012533 SE0012613
SE0012343	Cambridge Gold Pack King Soft Pack	SE0012531 SE0012616
SE0012344	L&M Blue Pack 100s Box	SE0012544 SE0012617
SE0012345	L&M Blue Pack Box	SE0012535 SE0012615
SE0012346	Marlboro 72's Gold Pack Box	SE0012536 SE0012614
SE0012347	L&M Bold Box	SE0012534 SE0012619
SE0012348	Marlboro Gold Pack 100s Box	SE0012537 SE0012620
SE0012349	Marlboro Gold Pack 100s Soft Pack	SE0012539 SE0012621
SE0012350	Marlboro Silver Pack 100s Box	SE0012538 SE0012618

SE0012351	Marlboro Silver Pack Box	SE0012545 SE0012623
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	SE0012542 SE0012543 SE0012624
SE0012353	Basic Menthol Gold Pack Box	SE0012540 SE0012625
SE0012356	Dave's Blue Pack Box	SE0012541 SE0012622

APPENDIX 2

List of Submissions by STNs of New Products, Predicate Products, and Provisional Products

STNs	New TP Brand/Sub-brand Name	Predicate Product Names	Provisional STN	Provisional Product names
SE0012332	Basic Blue Pack Box	Basic Ultra Lights Box	SE0000550	Basic Blue Pack Box
SE0012333	Basic Blue Pack Soft Pack	Basic Ultra Lights Box	SE0003269	Basic Blue Pack Soft Pack
SE0012334	Basic Gold Pack 100s Box	Basic Lights 100s Box	SE0000552	Basic Gold Pack 100s Box
SE0012335	Basic Gold Pack Box	Basic Lights Box	SE0000553	Basic Gold Pack Box
SE0012336	Basic Gold Pack 100s Soft Pack	Basic Lights 100s Box	SE0003267	Basic Gold Pack 100s Soft Pack
SE0012337	Basic Gold Pack Soft Pack	Basic Lights Box	SE0003244	Basic Gold Pack Soft Pack
SE0012338	Basic Menthol Box	Basic Menthol Box (2007)	SE0000555	Basic Menthol Box
SE0012339	Basic Menthol Gold Pack Soft Pack	Basic Menthol Lights Soft Pack	SE0003248	Basic Menthol Gold Pack Soft Pack
SE0012340	Basic Menthol Soft Pack	Basic Menthol Box (2007)	SE0003246	Basic Menthol Soft Pack
SE0012341	Basic Menthol Silver Pack	Basic Menthol Ultra Lights Box	SE0000559	Basic Menthol Silver Pack Box
SE0012342	Cambridge Gold Pack 100s Soft Pack	Cambridge Lights 100s Soft Pack	SE0000576	Cambridge Gold Pack 100s Soft Pack
SE0012343	Cambridge Gold Pack Kings Soft Pack	Cambridge Lights Kings Soft Pack	SE0000577	Cambridge Gold Pack Kings Soft Pack
SE0012344	L&M Blue Pack 100s Box	Basic Lights 100s Soft Pack	SE0000586	L&M Blue Pack 100s Box
SE0012345	L&M Blue Pack Box	Basic Lights Box	SE0000587	L&M Blue Pack Box
SE0012346	Marlboro 72's Gold Pack Box	Marlboro Lights Seventy-Twos Box	SE0000608	Marlboro 72's Gold Pack Box
SE0012347	L&M Bold Box	Basic Menthol Box	SE0000589	L&M Bold Box
SE0012348	Marlboro Gold Pack 100s Box	Marlboro Lights 100s Box	SE0000620	Marlboro Gold Pack 100s Box
SE0012349	Marlboro Gold Pack 100s Soft Pack	Marlboro Lights 100s Box	SE0003488	Marlboro Gold Pack 100s Soft Pack
SE0012350	Marlboro Silver Pack 100s Box	Marlboro Ultra Lights 100s Box	SE0000643	Marlboro Silver Pack 100s Box
SE0012351	Marlboro Silver Pack Box	Marlboro Ultra Lights Box	SE0000644	Marlboro Silver Pack Box
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	Marlboro Lights 100s Box	SE0000663	Marlboro Special Blend (Gold Pack) 100s box
SE0012353	Basic Menthol Gold Pack Box	Basic Menthol Lights Soft Pack	SE0000557	Basic Menthol Gold Pack Box
SE0012356	Dave's Blue Pack Box	Basic Lights Soft Pack	SE0000582	Dave's Blue Pack Box

CONFIDENTIAL APPENDIX 1

Modifications in the New Products Compared to the Grandfathered Predicate Products for Ingredients Other than Tobacco

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012356	Cigarette paper	(b) (4)				
	Tipping paper					

²⁹ Alternate ingredients correspond to the predicate products only

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
	Cigarette seam adhesive					
	Tipping adhesive					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012335 SE0012337	Cigarette paper	(b) (4)				
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
SE0012344	Cigarette paper					
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012345	Cigarette paper	(b) (4)				
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Cigarette paper					
SE0012347	Tipping paper					
	Cigarette seam adhesive					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Tipping adhesive	(b) (4)				
	Plug wrap					
	Plasticizer					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
	Cigarette paper					
SE0012338 SE0012340	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Filter tow					
SE0012341	Cigarette paper					
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
	Cigarette seam adhesive					
	Tipping adhesive					
	Plug wrap					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012334SE0012336	Cigarette paper	(b) (4)				
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Filter tow					
	Cigarette paper	(b) (4)				
SE0012332						

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012333		(b) (4)				
	Tipping paper					
	Cigarette seam adhesive					
	Tipping adhesive					
	Plug wrap					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Filter tow	(b) (4)				
SE0012343	Cigarette paper					
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012342	Cigarette paper	(b) (4)				
	Tipping paper					
	Cigarette seam adhesive					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Tipping adhesive	(b) (4)				
	Filter tow					
SE0012348 SE0012349	Cigarette paper					
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
	Cigarette seam adhesive					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
	Cigarette paper					
SE0012350	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Filter tow					
SE0012351	Cigarette paper					
	Tipping paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
			(b) (4)			

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Cigarette seam adhesive	(b) (4)				
	Tipping adhesive					
	Plug wrap					
	Filter tow					
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
SE0012352	Cigarette paper					
	Tipping paper					
	Cigarette seam					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	adhesive	(b) (4)				

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Tipping adhesive	(b) (4)				
	Filter tow					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
SE0012353 SE0012339	Cigarette paper	(b) (4)				
	Tipping paper					
	Cigarette seam adhesive					

³⁰ NA is not applicable.

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Tipping adhesive	(b) (4)				
	Plug wrap					
	Filter tow					
SE0012346	Cigarette paper					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
	Tipping paper	(b) (4)				
	Cigarette seam adhesive					

SE Report	Component	Ingredient	Function ²⁹	Quantity (mg/cigarette)		Change (%)
				New Product	Predicate Product	
		(b) (4)				
		(b) (4)				
	Plug wrap					
	Filter tow					

CONFIDENTIAL APPENDIX 2

Modifications in the New Products Compared to the Grandfathered Predicate Products for Tobacco Ingredients

SE Report	Ingredient	Function	Quantity (mg/cigarette)		Change (%)
			New Product	Predicate Product	
SE0012356	(b) (4)				
SE0012344					
SE0012347					
SE0012338					
SE0012340					
SE0012341					
SE0012343					
SE0012342					
SE0012353					
SE0012339					
SE0012346					

CONFIDENTIAL APPENDIX 3

Projected Market Volumes

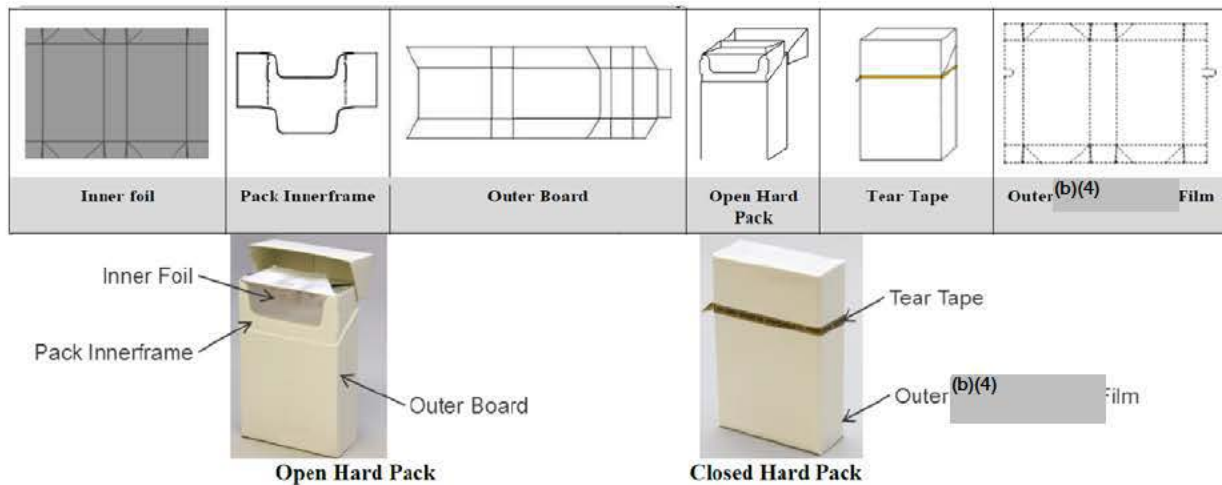
Product Identifier	STN	Projected Market Volume in 2015 (Million cigarettes)	Projected Market Volume in 2020 (Million cigarettes)
Basic Blue Pack Box	SE0012332	(b) (4)	
Basic Blue Pack Soft Pack	SE001233		
Basic Soft Pack	SE0009424		
Basic Gold Pack 100s Box	SE0012334		
Basic Gold Pack 100s Soft Pack	SE0012336		
Basic Gold Pack Box	SE0012335		
Basic Gold Pack Soft Pack	SE0012337		
Basic Menthol Box	SE0012338		
Basic Menthol Soft Pack	SE0012340		
Basic Menthol Silver Pack	SE001234		
Cambridge Gold Pack 100s Soft Pack	SE0012342		
Cambridge Gold Pack Kings Soft Pack	SE001234		
Dave's Blue Pack Box	SE0012356		
L&M Blue Pack 100s Box	SE0012344		
L&M Blue Pack Box	SE0012345		
L&M Bold Box	SE0012347		
Marlboro Gold Pack 100s Box	SE0012348		
Marlboro Gold Pack 100s Soft Pack	SE0012349		
Marlboro Silver Pack 100s	SE0012350		
Marlboro Silver Pack Box	SE0012351		
Marlboro Special Blend (Gold Pack) 100s	SE0012352		
Basic Menthol Gold Pack	SE0012353		
Marlboro 72's Box	SE0009474		
Marlboro 72's Gold Pack Box	SE0012346		
Basic Menthol Gold Pack Soft Pack	SE0012339		

a. PM USA stated that **(b) (4)**

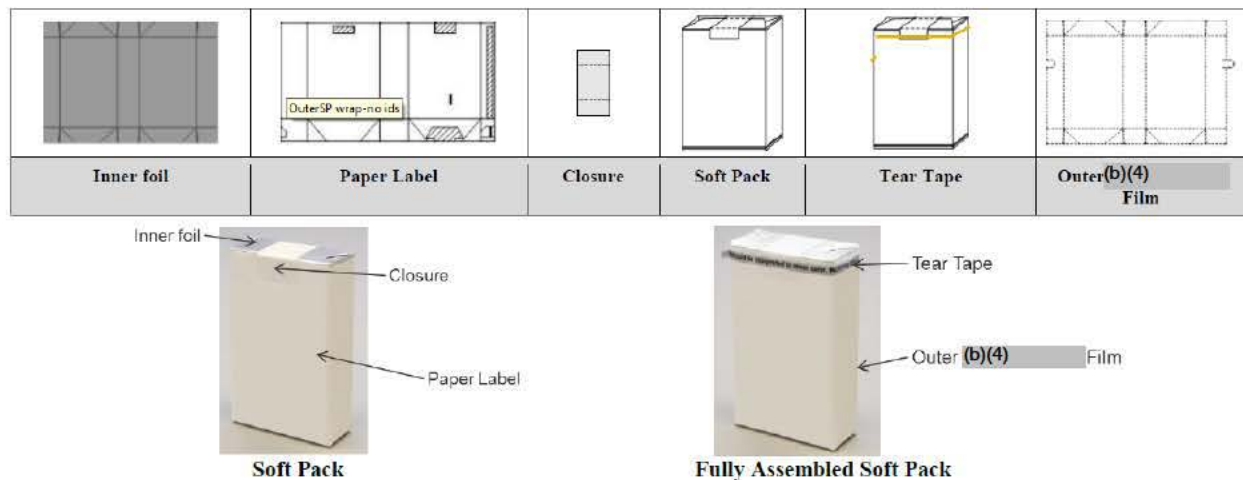
CONFIDENTIAL APPENDIX 4

Estimated Projections of Waste Associated with Marketing the New Products in 2015 and 2020

There are two types of cigarette packaging configurations of the new products; hard pack and soft pack. The cigarette hard pack consists of the following five packaging components: Inner Foil, Pack Innerframe, Outer Board, Outer (b)(4) Film and Tear Tape (see below). The cigarette hard pack consists of the following five packaging components: Inner Foil, Pack Innerframe, Outer Board, Outer (b)(4) Film and Tear Tape (see below; graphs from multiple amendments submitted on May 1, 2013).



The cigarette soft pack consists of the following five packaging components: Inner foil, Paper Label, Closure, Outer (b)(4) Wrap, and Tear Tape (see below; graphs from multiple amendments submitted on submitted on May 1, 2013).



The agency estimated the amount of waste (including aluminum foil, paper, cigarette butt, and plastic) generated from disposal after use of the new products and the provisional products in 2015 and 2020 (in short tons) as below:

Disposal of "Inner Foil": "Inner foil" is used as a functional barrier that prevents physical migration between the products and their outer paper packaging materials. The inner foil is a multilayer packaging material consisting of paper, (b) (4) adhesive, foil (b) (4), and (b) (4).

The projected total foil waste is (b) (4) tons and (b) (4) tons in 2015 and 2020, respectively. The aluminum foil waste is most likely to be landfilled.

STN's	Product Names	Aluminum Foil (g)	Total Projected Aluminum Foil Waste in 2015 ^a (short tons)	Total Projected Aluminum Foil Waste in 2020 ^a (short tons)
SE0012356	David's Blue Pack	0.8806	(b) (4)	(b) (4)
SE0012335	Basic Gold Pack Box	0.88		
SE0012344	L&M Blue Pack 100s Box	1.03		
SE0012345	L&M Blue Pack Box	0.8806		
SE0012347	L&M Bold Box	1.0807		
SE0012338	Basic Menthol Box	0.8806		
SE0012341	Basic Menthol Silver Pack Box	0.8806		
SE0012334	Basic Gold Pack 100s Box	1.0329		
SE0012332	Basic Blue Pack Box	0.8806		
SE0012341	Cambridge Gold Pack Kings Soft Pack	1.1719		
SE0012342	Cambridge Gold Pack 100s Soft Pack	1.3302		
SE0012337	Basic Gold Pack Box	1.1719		
SE0012340	Basic Menthol Box	1.1719		
SE0012336	Basic Gold Pack 100s Box	1.3302		
SE0012333	Basic Blue Pack Box	1.17		
SE0012348	Marlboro Gold Pack 100s Box	1.03		
SE0012350	Marlboro Silver Pack 100s Box	1.03		
SE0012351	Marlboro Silver Pack Box	0.88		

STN's	Product Names	Aluminum Foil (g)	Total Projected Aluminum Foil Waste in 2015 ^a (short tons)	Total Projected Aluminum Foil Waste in 2020 ^a (short tons)
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	1.0329	(b) (4)	
SE0012349	Marlboro Gold Pack 100s Box	1.3302		
SE0012353	Basic Menthol Gold Pack Box	0.88		
SE0012346	Marlboro 72's Gold Pack Box	0.8593		
SE0012339	Basic Menthol Gold Pack Box	1.1719		
Total Weight				

a. The total amount of weight of the aluminum foil waste is estimated as below:

$$A = \sum B \times C \times D, \text{ whereas}$$

A = total amount of weight of the waste foil (short ton)

B = weight of foil (g/pack)

C = market volume projection of each product (pack)

D = $1.10231131 \times 10^{-6}$ (short tons per gram)

Disposal of Paper Packaging Material:

Paper: The waste paper generated includes pack innerframe paper and outer board paper. The projected total paper waste is (b) (4) short tons in 2015 and (b) (4) in 2020. The paper waste can be recycled, can be landfilled or a combination of both.

STN's	Product Names	Total Paper Weight (g/pack)	Total Projected Paper Waste in 2015 (short tons) ^a	Total Projected Paper Waste in 2020 (short tons)
SE0012356	David's Blue Pack	5.713	(b) (4)	
SE0012335	Basic Gold Pack Box	5.71		
SE0012344	L&M Blue Pack 100s Box	6.26		
SE0012345	L&M Blue Pack Box	5.713		
SE0012347	L&M Bold Box	5.4263		
SE0012338	Basic Menthol Box	5.713		
SE0012341	Basic Menthol Silver Pack	5.713		
SE0012334	Basic Gold Pack 100s Box	6.2602		
SE0012332	Basic Blue Pack Box	5.713		
SE0012343	Cambridge Gold Pack Kings Soft Pack	1.4771		
SE0012342	Cambridge Gold Pack 100s Soft Pack	1.7497		
SE0012337	Basic Gold Pack Box	1.4771		
SE0012340	Basic Menthol Box	1.4771		
SE0012336	Basic Gold Pack 100s Box	1.7497		
SE0012333	Basic Blue Pack Box	1.48		
SE0012348	Marlboro Gold Pack 100s Box	6.26		
SE0012350	Marlboro Silver Pack 100s Box	6.26		

STN's	Product Names	Total Paper Weight (g/pack)	Total Projected Paper Waste in 2015 (short tons) ^a	Total Projected Paper Waste in 2020 (short tons)
SE0012351	Marlboro Silver Pack Box	5.71	(b) (4)	
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	6.2602		
SE0012349	Marlboro Gold Pack 100s Box	1.7497		
SE0012353	Basic Menthol Gold Pack Box	5.71		
SE0012346	Marlboro 72's Gold Pack Box	5.1225		
SE0012339	Basic Menthol Gold Pack Box	1.4771		
Total Waste				

a. The total amount of weight of the paper waste is estimated as below:

$$A = \sum(B+C) \times D \times E, \text{ whereas}$$

A = total amount of weight of the waste paper (short tons)

B = weight of pack innerframe (g/pack)

C = weight of outer board paper (g/pack)

D = market volume projection of each product (packs)

E = $1.10231131 \times 10^{-6}$ (short tons per gram)

Disposal of Polypropylene Wrap and Tear Tape: Cigarette outer (b)(4) film is made from an extruded (b)(4) resin. This (b) (4) to be incorporated into the film. The tear tape is a (b) (4)

The projected total plastic waste is (b) (4) short tons in 2015 and (b) (4) in 2020. The paper waste can be recycled, can be landfilled or a combination of both.

STN	Product Names	Total Plastic Weight (g/pack)	Total Projected Plastic Waste in 2015 (short tons)	Total Projected Plastic Waste in 2020 (short tons)
SE0012356	David's Blue Pack	0.3826	(b) (4)	
SE0012335	Basic Gold Pack Box	0.3826		
SE0012344	L&M Blue Pack 100s Box	0.4374		
SE0012345	L&M Blue Pack Box	0.3826		
SE0012347	L&M Bold Box	0.3194		
SE0012338	Basic Menthol Box	0.3826		
SE0012341	Basic Menthol Silver Pack Box	0.3826		
SE0012334	Basic Gold Pack 100s100s Box	0.4374		
SE0012332	Basic Blue Pack Box	0.3826		
SE0012343	Cambridge Gold Pack Kings Soft Pack	0.3483		
SE0012342	Cambridge Gold Pack 100s Soft Pack	0.4045		
SE0012337	Basic Gold Pack Box	0.3483		
SE0012340	Basic Menthol Box	0.3483		
SE0012336	Basic Gold Pack 100s Box	0.4045		
SE0012333	Basic Blue Pack Box	0.3483		
SE0012348	Marlboro Gold Pack 100s Box	0.4374		
SE0012350	Marlboro Silver Pack 100s Box	0.4374		

STN	Product Names	Total Plastic Weight (g/pack)	Total Projected Plastic Waste in 2015 (short tons)	Total Projected Plastic Waste in 2020 (short tons)
SE0012351	Marlboro Silver Pack Box	0.3826	(b) (4)	
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	0.4374		
SE0012349	Marlboro Gold Pack 100s Box	0.4045		
SE0012353	Basic Menthol Gold Pack Box	0.3826		
SE0012346	Marlboro 72's Gold Pack Box	0.3577		
SE0012339	Basic Menthol Gold Pack Box	0.3483		
Total waste				

Disposal of Cigarette Butts:

Landfills: In the scenario that all cigarette butts of the new products (or the provisional products) enter the landfills after use, the agency estimated that (b) (4) short tons of cigarette butt waste are anticipated to be generated in 2015 and (b) (4) short tons in 2020 as below.

STN's	Product Names	Filter Weights (mg/cig)	Projected Waste in 2015 (Short	Projected Market Volume in 2020
SE0012356	David's Blue Pack	224.8	(b) (4)	
SE0012335	Basic Gold Pack Box	224.8		
SE0012344	L&M Blue Pack 100s Box	251.7		
SE0012345	L&M Blue Pack Box	224.8		
SE0012347	L&M Bold Box	157.5		
SE0012338	Basic Menthol Box	167.8		
SE0012341	Basic Menthol Silver Pack	228.89		
SE0012334	Basic Gold Pack 100s Box	253.3		
SE0012332	Basic Blue Pack Box	226.4		
SE0012343	Cambridge Gold Pack Kings Soft Pack	224.8		
SE0012342	Cambridge Gold Pack 100s Soft Pack	253.3		
SE0012337	Basic Gold Pack Box	224.8		
SE0012340	Basic Menthol Box	167.8		
SE0012336	Basic Gold Pack 100s Box	253.3		
SE0012333	Basic Blue Pack Box	228.89		
SE0012348	Marlboro Gold Pack 100s Box	251.7		
SE0012350	Marlboro Silver Pack 100s Box	256.5		
SE0012351	Marlboro Silver Pack Box	226.4		
SE0012352	Marlboro Special Blend (Gold Pack) 100s Box	251.7		
SE0012349	Marlboro Gold Pack 100s Box	251.7		
SE0012353	Basic Menthol Gold Pack Box	223.3		

STN's	Product Names	Filter Weights (mg/cig)	Projected Waste in 2015 (Short tons)	Projected Market Volume in 2020 (Short tons)
SE0012346	Marlboro 72's Gold Pack Box	161.4	(b) (4)	
SE0012339	Basic Menthol Gold Pack Box	223.3		
Total Weight				

Litter: In the scenario when the cigarette butts are disposed of as litter, the amount of cigarette butt waste anticipated in 2015 from the new products is (b) (4) when comparing to the cigarette butts due to all cigarettes on the market in 2014; (b) (4) in 2020. Because the new products and the provisional products are consumed interchangeably by the users, allowing the new products to be marketed is not anticipated to change the cigarette market volume noticeably. Therefore, the current environmental introduction of discarded cigarette butts is not anticipated to change noticeably due to the disposal of the new products.