Preliminary Methodologies for Determining Fee Emissions for Consumer Products Manufacturers

for

Fiscal Year 2007-2008

- Fiscal Year (FY) 2007-2008 fees are determined using 2005 volatile organic compound (VOC) emissions.

- Air Resources Board (ARB) staff determined per-company 2005 VOC emissions using information gathered from the 2003 ARB Consumer and Commercial Products Survey (2003 CP Survey) and the 1997 ARB Aerosol Coating Survey (1997 AC Survey), except where a company elected to submit more recent information. If a company submitted comprehensive product sales and formulation information for 2003, 2004, or 2005, this information is used.

- VOC emissions have been adjusted by California population growth, except for emissions from aerosol coating products (see additional discussion below on determining fee emissions from aerosol coating products). VOC emissions based on the 2003 CP Survey information submittals or comprehensive 2003 information submittals have been adjusted by an approximate 2.90 percent increase in population in California between 2003 and 2005. VOC emissions determined using comprehensive 2004 information submittals have been adjusted by an approximate 1.21 percent increase in population between 2004 and 2005. The population trend information used is available at http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php. The California Department of Finance is the source for the population data.

- For FY 2007-2008 fee emissions, adjustments have been made for additional standards that took effect in 2005, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

Category	VOC Limit (% by Weight)
Air Fresheners: Double phase aerosols	25
Automotive Rubbing or Polishing Compounds	17
Automotive Wax/Polish/Sealant/Glaze:	
all other forms	15
hard paste waxes	45
Engine Degreasers:	
aerosol	35
non-aerosols	5
Furniture Maintenance Products: Aerosols	17
General Purpose Cleaners: non-aerosols	4
General Purpose Degreasers: non-aerosols	4
Glass Cleaners: Non-aerosols	4
Hair Shine	55
Heavy-duty Hand Cleaners or Soap	8
Insecticides*:	
flying bug: aerosols	25
lawn and garden:	
non-aerosol lawn and garden insecticides	3
Metal Polish/Cleanser	30
Nail Polish Removers	0
Paint Remover or Stripper	50
Rubber and Vinyl Protectant: Aerosols	10
Silicone-based Multi-purpose Lubricant:	
(excluding solid or semisolid products)	60

*Note: For a FIFRA-regulated product, the limit is effective one year after the date specified in the Table of Standards. Adjustments were made to 2005 VOC emissions.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at http://www.arb.ca.gov/consprod/regs/cp.pdf)

- Adjustments were not made for product categories not surveyed in the 2003 CP Survey. Adjustments will be made to these product categories after the 2006 ARB Consumer and Commercial Products Survey (2006 CP Survey) submittals are received and evaluated.

- Information on previous years' methodologies for determining fee emissions for consumer product manufacturers for FY 2003-2004, FY 2004-2005, and FY 2005-2006, FY 2006-2007 are described in the "Background Information for Previous Fiscal Years" section below. Previous years' methodologies for determining fee emissions for consumer products manufacturers are available at http://www.arb.ca.gov/consprod/regact/feewg/feewg.htm.

- No adjustment was made for aerosol coating products in 2005. For additional information, please go to the "Additional Discussion on Determining Fee Emissions from Aerosol Coating Products" section below.

- Emissions from "Paint Thinners and reducers" are included in the per-company emissions total. However, products used exclusively in furniture coating systems, in marine vessel and watercraft coating systems and in motor vehicle coating systems are not included in the per-company emissions. Please contact ARB staff for additional information.

- "Charcoal Lighter Material," which includes "Charcoal lighter fluids" and "Self-starting briquette," was assumed to emit 0.02 pounds VOC per start or the actual certification test results, if available. The number of starts was determined per the use instructions on the labels. These emissions are included in the per-company totals. However, other fuels and lighter materials products are not included in the per-company emissions.

- The large-container "Construction, Panel, and Floor Covering Adhesive," "Contact Adhesive - General Purpose," "Contact Adhesive - Special Purpose," and "General Purpose Adhesive," and "Sealant and Caulking Compound" (which weigh more than one pound and consist of more than 16 fluid ounces) that were reported in the 2003 CP Survey are not included in the per-company emissions. These large-container adhesives and sealants and caulks emissions are not included in the consumer products inventory and are regulated by local air agencies. Additionally, pipe cements of all sizes are not included in the per-company emissions as local air agencies regulate these products.

- Products that do not appear to be subject to the standard in a given category and were not in compliance with the VOC limit were not adjusted. Such products were assumed to be exempt "specialty products." Very few products in the fragrance categories were adjusted since most were assumed to be exempt or "grandfathered" products. For a more detailed discussion, see the Initial Statement of Reasons for Proposed Amendments to the California Clean Air Act Nonvehicular Source Fee Regulations, June 2003, page 25, which is available at http://www.arb.ca.gov/regact/feereg03/isor.pdf.

- The per-company emissions do not reflect survey market coverage adjustments. Adjustment factors are not applicable to individual companies.

- Some information on low vapor pressure (LVP)-VOCs was obtained in the 2003 CP Survey. However, LVP-VOCs are not currently included in the per-company emissions for consumer products. When additional LVP-VOC data is collected through future consumer product surveys, ARB staff intends to include per-company emissions of LVP-VOCs that are likely to see an atmospheric fate.

BACKGROUND INFORMATION FOR PREVIOUS FISCAL YEARS:

- Previous years' methodologies for determining fee emissions for consumer products manufacturers are available at http://www.arb.ca.gov/consprod/regact/feewg/feewg.htm.

- Previous FY 2003-2004, FY 2004-2005, FY 2005-2006, and FY 2006-2007 fees are determined using 2001, 2002, 2003, and 2004 volatile organic compound (VOC) emissions, respectively.

- ARB staff determined per-company 2001, 2002, 2003, and 2004 VOC emissions using information gathered from the 2003 ARB Consumer and Commercial Products Survey (2003 CP Survey), the 1997 ARB Consumer and Commercial Products Survey (1997 CP Survey) and the 1997 ARB Aerosol Coating Survey (1997 AC Survey), except where a company elected to submit more recent information. If a company submitted comprehensive product sales and formulation information for 2001, 2002, 2003, or 2004, this information is used.

- VOC emissions determined using the 1997 CP Survey data have been adjusted by an approximate 6.92 percent increase in population between 1997 and 2001; an approximate 8.89 percent increase in population between 1997 and 2002; an approximate 10.91 percent increase in population between 1997 and 2003. VOC emissions determined using the 2001 information submittals have been adjusted by an approximate 1.76 percent increase in population between 2001 and 2002 and an approximate 3.47 percent increase in population between 2001 and 2003. VOC emissions determined using comprehensive 2002 information submittals have been adjusted by an approximate 1.69 percent increase in population between 2002 and 2003. VOC emissions determined using the 2003 CP Survey data have been adjusted by an approximate 1.67 percent increase in population between 2003 and 2004.

- Previous FY 2003-2004 fee emissions were determined using 2001 VOC emissions. Adjustments were made to the VOC content of products in categories with standards that took effect between 1997 and 2001. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

Category	VOC Limit (% by Weight)
Carpet and Upholstery Cleaners	
Aerosols	7
Non-aerosols (ready to use)	3
Non-aerosols (dilutable)	0.1
Hair Sprays	55
Crawling Bug Insecticide (all forms)*	20
Personal Fragrance Product	
With 20 percent or less fragrance	75
With more than 20 percent fragrance	65
Spot Removers	
Aerosols	25
Non-aerosols	8
Automotive Instant Detailers	3

*Note: For a FIFRA-regulated product, the limit is effective one year after the date specified in the Table of Standards.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at http://www.arb.ca.gov/consprod/regs/cp.pdf)

- Previous FY 2004-2005 fee emissions were determined using 2002 VOC emissions. Adjustments were made for additional standards that took effect in 2002, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

Category	VOC Limit (% by Weight)
Aerosol Adhesives	55
Mist Spray	65
Web Spray	55
Special Purpose Spray Adhesives Mounting Automotive Engine Compartment, and Flexible Vinyl Adhesives	70
Polystyrene Foam and Automobile Headliner	65
Polyolefin and Laminate Repair/Edgebanding	60
Bug and Tar Remover	40
General Purpose Degreaser: Aerosols	50
Non-selective Terrestrial Herbicide: Non-aerosols*	3
Undercoating: aerosols	40

*Note: For a FIFRA-regulated product, the limit is effective one year after the date specified in the Table of Standards. No adjustments were made to 2002 VOC emissions.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at http://www.arb.ca.gov/consprod/regs/cp.pdf)

- Previous FY 2005-2006 fee emissions were determined using 2003 VOC emissions. Adjustments were made for additional standards that took effect in 2003, where applicable. When products' VOC content are above these standards, they are adjusted to the VOC limit for their respective categories. These product categories and VOC limits are identified below:

Category	**VOC Limit (% by Weight)**
Adhesives: Construction, panel, and floor coverings	15
Automotive Brake Cleaners	45
Automotive Windshield Washer Fluids:	
All other areas (all forms) **	
Dilutable and Pre-Mixed	1
Carburetor or Fuel-Injection Air Intake Cleaners	45
Hair Mousses	6
Multi-purpose Lubricant:	
(Excluding solid or semisolid products)	50
Non-selective Terrestrial Herbicide: Non-aerosols*	3
Penetrant	50
Rubber and Vinyl Protectant: Non-aerosols	3
Sealants and Caulking Compounds	4
Tire Sealants and Inflators	20

*Note: For a FIFRA-regulated product, the limit is effective one year after the date specified in the Table of Standards. Adjustments were made to 2003 VOC emissions.

**Note: "All other areas" excludes "Type A Areas." "Type A Areas" are Del Norte, Shasta and Trinity Counties; and the Great Basin Valley, Lake Tahoe, Mountain Counties, and Northeast Plateau Air Basins.

(Source: ARB, Regulation for Reducing VOC Emissions from Consumer Products; available at http://www.arb.ca.gov/consprod/regs/cp.pdf)

- Previous FY 2006-2007 fee emissions were determined using 2004 VOC emissions. Adjustments may have been made for products with VOC content above their respective standards. Since there were no new standards effective in 2004, adjustments were made only to products for VOC standards that took effect in 2003, where applicable, as these were assumed to be in a 3-year sell through period.

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Additional Discussion on Determining Fee Emissions from Aerosol Coating Products

- No population growth adjustments have been made to aerosol coating products emissions. The control measures assume no growth until 2001 statewide and until 2010 in South Coast. Growth factors are not available at this time.

- Effective dates for new limits for general coating categories and specialty coating categories are June 1, 2002, and January 1, 2003, respectively. These new limits are reactivity-based, instead of mass-based VOC limits. Equivalent mass-based VOC reductions for general coating categories and specialty coating categories were determined per Table III-2, Summary of VOC Emissions and Target Ozone Reductions, which is found in the Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emissions from Aerosol Coating Products and Proposed Tables of Maximum Incremental Reactivity (MIR) Values, and Proposed Amendments to Method 310, Release Date: May 5, 2000 (AC MIR ISOR). The table is provided in the attached excerpt of Chapter III of the AC MIR ISOR (See Attachment).

- For 2002 VOC emissions, emission reductions from the general aerosol coating categories were prorated by 7 of 12 months, as these limits did not take effect until June 1, 2002. "Prorated 2002 VOC Reductions" are identified in Table I: Aerosol Coating Products VOC Reductions Overview for Fee Emissions.

- For 2003 VOC emissions, emission reductions from both the general coating categories and specialty coating categories have been fully credited. 2003 VOC Reductions are identified in Table I: Aerosol Coating Products VOC Reductions Overview for Fee Emissions.

- Since there are no new effective limits in 2004 and 2005 for aerosol coating products, adjustments were made only to standards that took effect in 2003. 2003 VOC Reductions are identified in Table I: Aerosol Coating Products VOC Reductions Overview for Fee Emissions.

- For each category, total reported 1997 sales were determined and are included in Table III-1: Summary of Data from the 1997 Aerosol Coating Survey in the AC MIR ISOR (See Attachment). Each company has been credited with VOC reductions in proportion to its 1997 sales by category. "Total Category Sales" are identified in Table I: Aerosol Coating Products VOC Reductions Overview for Fee Emissions.

- If a company decides to submit updated sales information, the company's "VOC Reductions" will be adjusted where applicable. If a decrease in sales is reported, the VOC reduction will be lower, in proportion to the sales change.

Table 1:
Aerosol Coating Products VOC Reductions Overview for Fee Emissions

Aerosol Coating Category	VOC Reduction (tons per day)1	Prorated 2002 VOC Reduction (tons per year)2	2003 VOC Reduction (tpy)3	Total Category Sales (tpy)4
General Categories				
800 Clear Coatings	0.17	36.20	62.05	580.35
801 Flat Paint Products	0.33	70.26	120.45	1109.6
802 Fluorescent Coatings	0.03	6.39	10.95	131.4
803 Metallic Coatings	0.21	44.71	76.65	850.45
804 Nonflat Paint Products	1.37	291.70	500.05	5522.45
805 Primers	0.41	87.30	149.65	1299.4
Totals	**2.52**	**536.55**	**919.8**	**9493.65**
Specialty Categories				
810 Art Fixatives or Sealants	0.04	N/A	14.60	120.45
820 Auto Body Primers	0.04	N/A	14.60	182.50
830 Automotive Bumper and Trim Products	0.04	N/A	14.60	127.75
860 Exact Match Finishes: Engine Enamel	0.01	N/A	3.65	138.70
861 Exact Match Finishes: Automotive	0.04	N/A	14.60	262.80
890 Ground/Traffic/Marking	0.28	N/A	102.20	1168.00
900 High Temperature Coatings	0.07	N/A	25.55	255.50
980 Vinyl/Fabric/Leather/ Polycarbonate	0.03	N/A	10.95	120.45
All Other Coating Categories	0.03	N/A	10.95	635.10
Totals	**0.58**	N/A	**211.7**	**N/A**

Footnotes:
1. From Table III-2, May 5, 2000 AC MIR ISOR
2. For 2002, VOC reductions are prorated by 7 of 12 months, as these limits did not take effect until 6/1/02 and are multiplied by 365 days.
3. For 2003, VOC reductions are multiplied by 365 days.
4. From Table III-1, May 5, 2000, AC MIR ISOR, the total category sales data are multiplied by 365 days.

Note:
N/A=not applicable
The information above has not changed since the November 2004 edition of these methodologies.

ATTACHMENT

Excerpt from AC MIR ISOR:

Chapter III - Ozone Formation from Aerosol Coatings Emissions

(An excerpt from the Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emissions from Aerosol Coating Products and Proposed Tables of Maximum Incremental Reactivity (MIR) Values, and Proposed Amendments to Method 310, Release Date: May 5, 2000. The complete document is available at http://www.arb.ca.gov/regact/conspro/aerocoat/aerocoat.htm under Public Hearing Notice and Related Material.)

III.

Ozone Formation from Aerosol Coating Emissions

As stated in the previous Chapter, the proposed amendments present a new approach to regulate the emissions from aerosol coating products. Using the concepts of reactivity, staff is proposing to replace the January 1, 2002, volatile organic compound (VOC) content limits with reactivity limits that achieve an equivalent air quality result. To do this, it is necessary to quantify the ozone reduction that would be associated with the VOC limits and set reactivity limits that achieve that ozone reduction target. In this way the proposed reactivity limits should ensure an equal air quality benefit.

To set reactivity-based limits, information on the amounts and types of reactive organic compounds emitted, as well as aerosol coating product sales are needed. These data are readily available from the 1997 Aerosol Coating Survey (ARB, 1998b). These same data were used as the basis for setting the January 1, 2002, VOC limits. In this Chapter, we provide a summary of the data on the VOC emissions and sales of aerosol coatings. In addition, the product category reactivities, VOC reductions and the corresponding ozone reduction commitments are shown on a category-by-category basis.

A. Emissions from Aerosol Coating Products Contribute to the Formation of Ozone in the Troposphere

The use of aerosol coating products results in VOC emissions which originate from the propellants and solvents contained in them (Dunn, 1993; Fortmann *et al.,* 1998). Once in the air, these compounds, in the presence of sunlight, react with nitrogen oxides to form ozone. Hence, we have been regulating VOC emissions from aerosol coatings as part of our ozone control strategy.

When aerosol coatings are used outdoors or in well ventilated areas, the VOCs have a direct route to ambient air after they have vaporized. The propellants used in aerosol coatings, such as isobutane, propane, and dimethyl ether, are gases at room temperature. These gases are emitted when an aerosol coating is sprayed and are immediately available for transport to the atmosphere. The solvents used in aerosol coatings evaporate during the application and drying processes of the paint. Typically, a solvent-blend of fast evaporating and slow to medium evaporating solvents is used in the formulation, to provide the correct drying time for the paint film. The evaporation of the solvents takes place in two stages, with the initial loss of solvent (up to 80 percent) being dependent on the vapor pressure of the fast evaporating solvent. After the initial loss of solvent, the polymer film is formed. The remaining solvent loss is caused by a slower diffusion-controlled process (ICAG, 1987). The nonvolatile portion of the coating remains in the cured coating film and, under normal use conditions, is not emitted to the atmosphere.

B. Air Resources Board Emissions Survey

The emission inventory was developed for aerosol coatings based on a survey questionnaire sent out to 313 potential responsible parties and manufacturers of aerosol coatings. Among other information, manufacturers and responsible parties supplied information on product formulation and product sales. Data were received from 137 responsible parties and 53 manufacturers. These data accounted for at least 90 percent of the sales of aerosol paint in California during 1997. A further discussion of survey development and the information supplied is contained in the "Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emissions from Aerosol Coatings, Antiperspirants and Deodorants, and Consumer Products" (ARB, 1998a).

C. Summary of the Data from the 1997 Aerosol Coatings Survey

To interpret the data in the following tables, we begin by defining some reactivity-related terms. It is also important to note the distinction we are making between VOC and reactive organic compound (ROC). "VOC," as defined in the mass-based regulation does not include the exempted compounds such as acetone. In our reactivity-based regulation, we are proposing to use the term "ROC" to clarify that all VOCs, including exempt compounds such as acetone, are considered for evaluating products' reactivities. This distinction explains the difference between VOC and ROC emissions reported in Table III-1.

Reactivity related terms used in the following tables:

- SWA-MIR_{prod} is the sales-weighted average maximum incremental reactivity (MIR) of the products reported in an aerosol coating category.

- SWA-MIR_{VOC} is the sales-weighted average maximum incremental reactivity of the products (SWA-MIR_{prod}) divided by the sales-weighted average VOC content of the product category, as explained in Chapter IV. The SWA-MIR_{VOC} is used to calculate the equivalent ozone reduction. The tpd VOC reduction commitment is based on reductions of VOCs (not including acetone).

- Total Ozone Formation is the potential amount of ozone (reported here in tpd) formed from emissions of the VOCs in the aerosol coating category.

- Unadjusted Equivalent Ozone Reduction is the equivalent ozone reduction expected to be achieved from the tpd VOC reduction commitment. The unadjusted ozone reduction is calculated by multiplying the tpd VOC reduction by the SWA-MIR_{VOC}.

- Adjusted SWA-MIR_{VOC} is the SWA-MIR_{VOC} adjusted for mechanistic uncertainty of ingredient MIR values.

- Adjusted Equivalent Ozone Reduction is the ozone reduction calculated by multiplying the tpd VOC reduction commitment by the adjusted SWA-MIR_{VOC}.

This is the amount of ozone reduction that needs to be achieved by the proposed reactivity limit.

Table III-1 summarizes product sales and VOC and ROC emissions calculated from the survey data. As shown from Table III-1, sales from all coating categories were about 34.3 tpd, with VOC emissions of 19 tpd. Adjusting for survey coverage (which is an approximate 10 percent adjustment), VOC emissions were estimated to be 21 tpd in California in 1997. Data shown in Tables 1and 2 are based on actual reported emissions. Total ROC emissions were reported as 26.5 tpd. Based on the survey data, the six "general" aerosol coating categories account for approximately 77 percent of the total ROC emissions and 78 percent of the total amount of ozone formed from aerosol coating emissions in California in 1997. The remaining 23 percent of ROC emissions and 22 percent of total ozone formed can be attributed to the combined emissions from the 29 "specialty" aerosol coating categories. Among all categories, nonflat ("glossy") coatings are 43 percent of the ROC emissions and represent almost 46 percent of the total ozone formation.

Table III-2 summarizes our estimates of VOC emission reductions and the corresponding ozone reduction (i.e. unadjusted equivalent ozone reduction) that would have occurred upon implementation of the VOC standards adopted by the Board on November 19, 1998. As detailed in Chapter IV, not all VOC have been thoroughly studied. In these instances, uncertainty factors are applied to the ingredient MIR values prior to determining what the "ozone reduction target" should be. After accounting for MIR value uncertainty, the adjusted SWA-MIR_{VOC} is multiplied by the VOC reduction commitment (in tpd). This ozone reduction target is shown in Table III-2 as "adjusted equivalent ozone reduction." Nevertheless, these adjustments are rather insignificant (up to 10 percent), suggesting that the compounds used in aerosol coating products are reasonably well studied (see also Chapter IV).

As shown in Table III-2, the VOC standards would have achieved reductions of 3.1 tpd from VOC emissions totaling 19 tpd. The total VOC emissions and VOC emission reductions shown in Tables III-1 and 2 are different from those reported in the October 2, 1998, staff report (ARB, 1998a). Upon further quality checks of the data, data entry errors were found in the ground traffic and marking coating category. After correcting the data, the VOC emissions and VOC reductions from the ground traffic and marking category are 1.7 tpd and 0.28 tpd, respectively. Previously we reported emissions of 2.83 tpd and a reduction of 0.74 tpd.

TABLE III-1
SUMMARY OF DATA FROM THE 1997 AEROSOL COATING SURVEY

Aerosol Coating Category	California Sales (tons per day)	VOC Emissions (tons per day)	ROC Emissions (tons per day)	$SWA\text{-}MIR_{prod}$ (g O_3/g product)	Total Ozone Formation (tons per day)
General Categories					
Clear Coatings	1.59	0.96	1.36	1.66	2.64
Flat Paint Products	3.04	1.54	2.36	1.52	4.62
Fluorescent Coatings	0.36	0.24	0.25	1.63	0.59
Metallic Coatings	2.33	1.65	1.88	2.09	4.87
Nonflat Paint Products	15.13	8.13	12.09	1.62	24.51
Primers	3.56	1.82	2.59	1.33	4.73
Specialty Categories					
Art Fixatives or Sealants	0.33	0.23	0.28	1.56	0.51
Auto Body Primers	0.50	0.25	0.37	1.69	0.85
Auto Bumper and Trim	0.35	0.30	0.32	1.59	0.56
Exact Match Finishes: Engine Enamel	0.38	0.18	0.32	1.52	0.58
Exact Match Finishes: Automotive	0.72	0.39	0.64	1.68	1.21
Ground/Traffic/Marking	3.20	1.70	1.81	1.35	4.32
High Temperature Coatings	0.70	0.48	0.60	2.04	1.43
Vinyl/Fabric/Leather/ Polycarbonate	0.33	0.25	0.31	1.67	0.55
All Other Coating Categories	1.74	0.89	1.36	N/A	1.66
Totals	34.25	18.99	26.54	N/A	53.63

N/A : not applicable

TABLE III-2
SUMMARY OF VOC EMISSIONS AND TARGET OZONE REDUCTIONS

Aerosol Coating Category	VOC Reduction (tons per day)	Unadjusted [a]SWA-MIR$_{VOC}$ (g O_3/g VOC)	Adjusted [a]SWA-MIR$_{VOC}$ (g O_3/g VOC)	Unadjusted Equivalent Ozone Reduction (tons per day)	Adjusted Equivalent Ozone Reduction (tons per day)
General Categories					
Clear Coatings	0.17	2.75	3.00	0.47	0.52
Flat Paint Products	0.33	3.00	3.21	0.99	1.06
Fluorescent Coatings	0.03	2.45	2.63	0.07	0.07
Metallic Coatings	0.21	2.95	3.07	0.62	0.66
Nonflat Paint Products	1.37	3.01	3.26	4.12	4.46
Primers	0.41	2.60	2.77	1.07	1.13
Specialty Categories					
Art Fixatives or Sealants	0.04	2.24	2.35	0.09	0.10
Auto Body Primers	0.04	3.35	3.62	0.13	0.13
Auto Bumper and Trim	0.04	1.89	1.97	0.07	0.08
Exact Match Finishes: Engine Enamel	0.01	3.13	3.42	0.03	0.04
Exact Match Finishes: Automotive	0.04	3.11	3.17	0.12	0.14
Ground/Traffic/Marking	0.28	2.54	2.78	0.71	0.78
High Temperature Coatings	0.07	3.01	3.15	0.21	0.22
Vinyl/Fabric/Leather/ Polycarbonate	0.03	2.27	2.34	0.07	0.08
All Other Coating Categories*	0.03	N/A	N/A	0.04	0.06
Totals	3.11	N/A	N/A	8.82	9.56

[a]SWA-MIR$_{VOC}$ = SWA-MIR$_{prod}$ / SWA-VOC
N/A : not applicable

REFERENCES

Air Resources Board. (1998a), Initial Statement of Reasons for the Proposed Amendments to the Regulations for Reducing Volatile Organic Compound Emission from Aerosol Coatings, Antiperspirants and Deodorants, and Consumer Products. October 2, 1998.

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