

**AIR EMISSION PERMIT NO. 14100059- 003**

**IS ISSUED TO**

**New Flyer Industries Limited**

New Flyer USA Inc - St Cloud  
6200 Glenn Carlson Dr  
St. Cloud, Stearns County, MN 56301

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	July 17, 1998
Major Amendment	September 17, 2001

This permit authorizes the permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** State: Synthetic Minor PSD/NSR

**Issue Date:** November 27, 2001

**Expiration:** Permit does not expire  
All Title I Conditions do not expire.

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Ann M. Foss  
Manager  
Majors Air and Construction Section  
Majors and Remediation Division

For Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

AMF:smd

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**NOTICE TO THE PERMITTEE:**

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

**PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

**FACILITY DESCRIPTION:**

New Flyer currently operates a bus manufacturing facility in St. Cloud, Minnesota. The plant currently consists of two manufacturing lines. The facility currently has one complete build line for bus assembly from parts (A-line) and one finishing line to complete partially assembled buses (B-line) shipped from the New Flyer facilities located in Winnipeg, Canada and Crookston, Minnesota.

To allow for the manufacture of a new bus design (the Invero) at the facility, this permit allows for the installation and operation of a second undercoat booth (designated as EU 017) at the facility. This new booth will have two exhaust stacks designated as SV 026 and SV 027. Emissions from the booth will be controlled by panel filters designated as CE 011.

The permit contains limits which restrict emissions to levels that are below the major source thresholds in 40 CFR 52.21, 40 CFR pt. 70 and 40 CFR pt. 63, so the facility is considered a minor source under the New Source Review program, Part 70 permitting program and the National Emission Standards for Hazardous Air Pollutants for Source Categories.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud  
 Permit Number: 14100059 - 003

**Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.**

Subject Item:	Total Facility
What to do	Why to do it
MODELING AND EMISSION FACTOR REQUIREMENTS	hdr
Parameters Used in Modeling: The parameters used in the modeling performed for determining emission and/or usage limits for this facility are listed in Appendix I of this permit. If the Permittee intends to change any of these parameters, the Permittee must submit the revised parameters to the Commissioner and receive written approval before making any changes. The revised parameter information submittal must include: the locations, heights and diameters of the stacks; locations and dimensions of nearby buildings; velocity and temperatures of the gases emitted; and the emission rates. The plume dispersion characteristics due to the parameter revisions must equal or exceed the dispersion characteristics modeled for this permit, and the Permittee shall demonstrate this in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
Parameters Used in Modeling (continued):  Re-modeling can be done using a more refined model than the original screen model.  Pollutant Emission Rates: If the Permittee proposes to emit any pollutant in addition to those listed in Appendix I of this permit, or proposes to increase the emission rate of any pollutant listed in Appendix I, the Permittee shall first use the New Flyer Risk Management Screening Analysis (RMSA) report as a template for recalculating the risk due to the change in emissions. The Permittee shall submit a report to the MPCA of the proposed change and demonstrate that the recalculated risk for all pollutants emitted from the facility does not exceed the acceptable risk criteria used in the New Flyer RMSA report. The Permittee must receive written approval from the MPCA before making any changes.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
Parameters Used in Modeling (continued):  For changes that do not involve an increase in an emission rate and that do not require a permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.  For changes involving increases in emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.  For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit amendment application.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
The Permittee shall submit an Emission Factor Development Proposal for Hexamethylene-1,6 diisocyanate (HDI) to the MPCA, as required in Table B of this permit. The submittal shall contain a plan describing the methods that will be used to develop an emission factor (e.g., performance testing, engineering analysis, etc.) and a schedule by when the factor shall be submitted to the MPCA for review and approval.	Minn. R. 7007.0800, subp. 2
GENERAL REQUIREMENTS	hdr
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A or B, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

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<p>Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.</p>	<p>Minn. R. 7011.0020</p>
<p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.</p>	<p>Minn. R. 7019.1000, subp. 4</p>
<p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>
<p>Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.</p>	<p>Minn. R. 7011.0150</p>
<p>Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<p>Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<p>Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not federally enforceable.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
The construction authorization expires 18 months after permit issuance. The Permittee must keep a record of the dates of installation and start-up on site. The Permittee may apply for an extension of the construction authorization deadline by following the Administrative Amendment provisions in Minn. R. 7007.1400.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud  
 Permit Number: 14100059 - 003

**Subject Item: GP 001 Facility Emission Limits**

- Associated Items:** EU 001 Power Wash Booth  
 EU 002 Primer Booth  
 EU 003 Adhesive Application  
 EU 004 Undercoat Booth  
 EU 005 Floor Prep  
 EU 006 Paint Prep  
 EU 007 Base Coat/Prime Booth  
 EU 008 Topcoat Booth  
 EU 009 Touch-up Booth  
 EU 010 Touch-up Booth  
 EU 011 Topcoat Booth  
 EU 012 Touch-up Booth  
 EU 013 Gun Cleaning  
 EU 017 Undercoating Booth No. 2

What to do	Why to do it
A. LIMITS	hdr
Volatile Organic Compounds: less than or equal to 95.0 tons/year using 12-month Rolling Sum . For the first 12 months after startup, the Permittee shall calculate and record the applicable limit as of month "n" using the following formula: Limit = 7.9(n) Where n = number of months since startup of any emission unit in GP 001.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2
HAPs - Total: less than or equal to 24.0 tons/year using 12-month Rolling Sum . This is a limit on HAP dispensed minus HAP recycled as waste. No credit is given for either transfer efficiency or the spray booth filters. For the first 12 months after startup, the Permittee shall calculate and record the applicable limit as of month "n" using the following formula: Limit = 2.0(n) Where n = number of months since startup of any emission unit in GP 001.	Title I Condition: Limit to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2
HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum . This is a limit on HAP dispensed minus HAP recycled as waste. No credit is given for either transfer efficiency or the spray booth filters. For the first 12 months after startup, the Permittee shall calculate and record the applicable limit as of month "n" using the following formula: Limit = 0.75(n) Where n = number of months since startup of any emission unit in GP 001.	Title I Condition: Limit to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2
Lead: less than or equal to 1.0 tons/year using 12-month Rolling Sum (usage). For the first 12 months after startup, the Permittee shall calculate and record the applicable limit as of month "n" using the following formula: Limit = 0.083(n) Where n = number of months since startup of any emission unit in GP 001. (The limit is on the weight of elemental lead itself. Lead compounds are limited under the HAP-Single limit.)	Minn. R. 7009.0020
Antimony: less than or equal to 5.50 tons/year using 12-month Rolling Sum (usage). For the first 12 months after startup, the Permittee shall calculate and record the applicable limit on tons per year as of month "n" using the following formula: Limit = 0.458(n) Where n = number of months since startup of any emission unit in GP 001. (The limit is on the weight of elemental antimony itself. Antimony compounds are limited under the HAP-Single limit.)	Minn. R. 7007.0800, subp. 2
Barium Sulfate: less than or equal to 0.24 tons/year, based on a 12-month Rolling Sum (usage). For the first 12 months after startup, the Permittee shall calculate and record the applicable limit in tons per year as of month "n" using the following formula: Limit = 0.02(n) Where n = number of months since startup of any emission unit in GP 001.	Minn. R. 7007.0800, subp. 2
Benzene: less than or equal to 0.24 tons/year using 12-month Rolling Sum (usage). For the first 12 months after startup, the Permittee shall calculate and record the applicable limit on tons per year as of month "n" using the following formula: Limit = 0.02(n) Where n = number of months since startup of any emission unit in GP 001.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

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<p>Chromium: The Permittee shall not use paint or other coating materials that contain chromium or chromium compounds. The Permittee shall keep records of all coating material contents. Coating material contents shall be determined as described under the Determination of Material Content For Emission Calculations requirement in GP 001.</p>	<p>Minn. R. 7007.0800, subps. 2 and 5</p>
<p>Nickel: The Permittee shall not use paint or other coating materials that contain nickel or nickel compounds. The Permittee shall keep records of all coating material contents. Coating material contents shall be determined as described under the Determination of Material Content For Emission Calculations requirement in GP 001.</p>	<p>Minn. R. 7007.0800, subps. 2 and 5</p>
<p>Toluene: less than or equal to 30.0 lbs/hour based on a weekly block average, but not to exceed 9.0 tons/year per the HAP-Single limit. No credit is provided from toluene shipped as waste.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Xylenes (mixed isomers): less than or equal to 10.0 lbs/hour based on a weekly block average, but not to exceed 9.0 tons/year per the HAP-Single limit. No credit is provided from xylenes shipped as waste.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p><b>B. MONITORING</b></p>	<p>hdr</p>
<p>Determination of Material Content For Emission Calculations: VOC, HAP, and metal contents in all materials shall be determined by the Environmental Data Sheet (EDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used, except as specified below. If the EDS or MSDS provides a material content range, the highest number in the range shall be used in all calculations.</p> <p>Alternative methods approved by the MPCA may be used to determine material VOC, HAP, and metal contents. In addition, the Commissioner reserves the right to require the Permittee to determine the VOC, HAP, and metal contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the EDS or MSDS.</p>	<p>Title I Condition: Monitoring to avoid classification as a major source under 40 CFR Sections 52.21 and to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 4</p>
<p>Determination of VOC and HAP Content in Shipped Wastes:</p> <p>If the Permittee elects to obtain credit for VOC and/or HAP in shipped waste, the Permittee shall use either method 1 or 2 to determine the VOC and HAP content in shipped wastes.</p> <p>1) The Permittee or the company receiving the waste shall analyze a sample of each container of waste using a gas chromatograph or other method approved by the Commissioner, to determine weight content of VOC and each individual HAP.</p> <p>2) If the waste is not composed of more than one raw material (coatings, solvents, etc.), the Permittee may use MSDS or EDS for the raw materials, to determine the VOC and each individual HAP content of the waste.</p>	<p>Title I Condition: Monitoring to avoid classification as a major source under 40 CFR Sections 52.21 and to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 5</p>
<p>Determination of Material Content For Usage Calculations:</p> <p>Antimony, Barium Sulfate, Benzene, and Lead contents for each material shall be determined as described under the Determination of Material Content For (for VOC, HAPs, and metals) Emission Calculations requirement in GP 001.</p>	<p>Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 4</p>
<p><b>C. RECORDKEEPING</b></p>	<p>hdr</p>
<p>Calculation of Mass of Shipped VOCs and HAPs - If the Permittee elects to obtain credit for VOC and HAP contained in shipped waste, calculate and record the mass of shipped VOCs, individual HAP, and total HAPs using billing records and analyses or MSDS/EDS, as appropriate. If a range of values is given, use the minimum values.</p> <p>Calculations and recordings shall be made by the fifteenth day of the month following the month that an analysis (or billing) is received. Emission credits for shipped VOCs and HAPs shall be applied to the monthly emission calculation for the month that contains the calculation and recording deadline. All records, including analyses and billings, shall be dated.</p>	<p>Title I Condition: Recordkeeping to avoid classification as a major source under 40 CFR Sections 52.21 and to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 5</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud  
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<p>Recordkeeping - VOC Emissions: for all VOC dispensed, calculate and record as follows:</p> <p>1) For units EU 007, 008, 009, 010, 011, and 012, a daily paint mix system report shall be generated that calculates the tons of VOC dispensed;</p> <p>2) For units EU 001, 002, 003, 004, 005, 006, 013 and 017, a weekly log shall be kept that records the amount, product type, and VOC content of each material used. The log shall also record the calculated tons of VOC dispensed. The log shall be completed by each Monday for the previous week. VOC content shall be determined as prescribed in the Determination of Material Content For Emission Calculations requirement in GP 001.</p> <p>By the 15th day of each month, calculate and record the VOC emissions for the previous month (by summing all daily and weekly VOC emission data, and subtracting any VOC shipped as waste) and the previous 12-month period (by summing monthly VOC emissions data for the previous 12 months).</p>	<p>Title I Condition: Recordkeeping to avoid classification as a major source under 40 CFR Sections 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping - Single HAP Emissions: for each HAP dispensed, calculate and record as follows:</p> <p>1) For units EU 007, 008, 009, 010, 011, &amp; 012, a daily paint mix system report shall be generated that calculates tons of each HAP dispensed;</p> <p>2) For units EU 001, 002, 003, 004, 005, 006, 013 &amp; 017, a weekly log shall be kept that records the amount, product type and each HAP content of each material used. The log shall record the calculated tons of each HAP dispensed and shall be completed by each Monday for the previous week. HAP content shall be determined as prescribed in the Determination of Material Content For Emission Calculations requirement in GP 001.</p> <p>By the 15th day of each month, calculate and record single HAP emissions for the previous month (by summing all daily and weekly single HAP emissions for the month, and subtracting any single HAP shipped as waste), and the previous 12-month period (by summing all monthly single HAP emissions for the previous 12 months).</p>	<p>Title I Condition: Recordkeeping to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping - Total HAP Emissions:</p> <p>By the 15th day of each month:</p> <p>1) Calculate and record total HAP emissions for the previous month by summing all single HAP emissions data for the month;</p> <p>2) Calculate and record total HAP emissions for the previous 12-month period by summing all monthly total HAPs emissions data for the previous 12 months.</p>	<p>Title I Condition: Recordkeeping to avoid 40 CFR Sections 63.40 to 63.44; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping - Antimony, Barium Sulfate, Benzene, and Lead Usage: Calculate and record Antimony, Barium Sulfate, Benzene, and Lead dispensed, using the following records:</p> <p>1) For units EU 007, 008, 009, 010, 011, and 012, a daily paint mix system report shall be generated that calculates the tons of each pollutant dispensed;</p> <p>2) For units EU 001, 002, 003, 004, 005, 006, 013 and 017, a weekly log shall be kept that records the amount, product type, and content of each material for each pollutant. The log shall be completed each Monday and record the calculated tons of Antimony, Barium Sulfate, Benzene, and Lead dispensed during the previous week.</p> <p>By the 15th day of each month, calculate and record the Antimony, Barium Sulfate, Benzene, and Lead Usage for the previous month (by summing all daily and weekly emissions data for each pollutant for the month) and for the previous 12-month period.</p> <p>No credit is given for pollutants shipped off-site in waste.</p>	<p>Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping -- Operating Hours When Using Xylenes- and Toluene-Containing Materials: Once each day separately record the number of operating hours that xylenes-containing materials and toluene-containing materials were used in any emission unit in GP 001. By Monday of each week, separately calculate and record the total operating hours that xylenes-containing materials and toluene-containing materials were used in any emission unit in GP 001 during the previous week.</p>	<p>Minn. R. 7007.0800, subp. 5</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

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<p>Recordkeeping -- Xylenes and Toluene Emissions: By Monday of each week, calculate and record Toluene and Xylenes average hourly emission rate for the previous week as follows:</p> <ol style="list-style-type: none"><li>1) For units EU 007, 008, 009, 010, 011, and 012, a daily paint mix system report shall be generated that calculates the tons of toluene and xylenes dispensed;</li><li>2) For units EU 001, 002, 003, 004, 005, 006, 013 and 017, a weekly log shall be kept that records the amount, product type, and toluene and xylene content of each material. It shall also show the calculated tons of toluene and xylenes dispensed and shall be completed by Monday for the previous week;</li><li>3) The average hourly emission rates of Toluene and Xylenes shall be determined and recorded using the daily and weekly records listed above divided by the number of operating hours during the recording period.</li></ol> <p>Toluene and xylenes shipped as waste are not included in the toluene and xylenes hourly emission calculations.</p>	<p>Minn. R. 7007.0800, subp. 5</p>
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**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: GP 002 Industrial Process Equipment Requirements**

- Associated Items:** EU 001 Power Wash Booth  
 EU 002 Primer Booth  
 EU 003 Adhesive Application  
 EU 004 Undercoat Booth  
 EU 005 Floor Prep  
 EU 006 Paint Prep  
 EU 007 Base Coat/Prime Booth  
 EU 008 Topcoat Booth  
 EU 009 Touch-up Booth  
 EU 010 Touch-up Booth  
 EU 011 Topcoat Booth  
 EU 012 Touch-up Booth  
 EU 013 Gun Cleaning  
 EU 017 Undercoating Booth No. 2

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to meet the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This standard applies individually to each emission unit in GP 002. Other permit requirements (e.g., control requirements and coating usage limits) are more restrictive, for particulate matter emissions, than this rule. See GP 003, GP 004, EU 002, EU 004, and EU 006 for periodic monitoring requirements for particulate matter emissions.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This standard applies individually to each emission unit in GP 002. See GP 003 and EU 006 for periodic monitoring requirements for opacity.	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: GP 003 Panel Filter Requirements**

- Associated Items:** CE 001 Mat or Panel Filter  
 CE 002 Mat or Panel Filter  
 CE 003 Mat or Panel Filter  
 CE 004 Mat or Panel Filter  
 CE 005 Mat or Panel Filter  
 CE 006 Mat or Panel Filter  
 CE 007 Mat or Panel Filter  
 CE 008 Mat or Panel Filter  
 CE 011 Mat or Panel Filter

What to do	Why to do it
Particulate Matter < 10 micron: greater than or equal to 94.0 percent control efficiency . This condition is applicable to CE 001 to CE 008.	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 14
Total Particulate Matter: greater than or equal to 94.0 percent control efficiency . This condition is applicable to CE 001 to CE 008.	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; Minn. R. 7007.0800, subp. 14
Particulate Matter < 10 micron: greater than or equal to 73.6 percent control efficiency . This condition is applicable to CE 011.	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; Minn. R. 7007.0800, subp. 14
Total Particulate Matter: greater than or equal to 73.6 percent control efficiency . This condition is applicable to CE 011.	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; Minn. R. 7007.0800, subp. 14
Operate and maintain control equipment to achieve a control efficiency for lead, antimony, and barium sulfate: greater than or equal to 94 percent control efficiency	Minn. R. 7009.0020; Minn. R. 7007.0800, subps. 2 and 14
Operation and Maintenance of Panel Filter: The Permittee shall operate and maintain each panel filter according to the control equipment manufacturer's specifications. The Permittee shall maintain the pressure differential across each filter within the range established during the initial performance test.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 14
Pressure Drop Monitoring: The pressure drop shall be monitored continuously by the paint booth control system when each booth is in operation. The paint booth monitoring system shall signal operators when the pressure drop across the filters is outside the prescribed range.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 4
Inspections: Once each operating day, the Permittee shall visually inspect the condition of the panel filters, including but not limited to, alignment, saturation, tears, and holes. The Permittee shall maintain a daily written record of filter inspections and maintenance.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 4
Corrective Actions: If the pressure drop across a panel filter is outside the range prescribed in the performance test or if the filters are found to need repair during the visual inspection, the Permittee shall follow the Operation and Maintenance plan for the panel filter and take corrective actions as soon as possible to restore the pressure differential to within the prescribed range. The Permittee shall keep a record of the type and date of any corrective action taken for each panel filter, as soon as possible after completion of any corrective action.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
Initial Performance Test: due 180 days after Initial Startup to measure control efficiency for PM10 on 4 representative units.	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup to measure control efficiency for lead, antimony, and barium sulfate on 4 representative units.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Initial Performance Test (see Table B for additional performance test requirements).	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: GP 004 Coating Usage Limits**

**Associated Items:** EU 007 Base Coat/Prime Booth

EU 008 Topcoat Booth

EU 009 Touch-up Booth

EU 010 Touch-up Booth

EU 011 Topcoat Booth

EU 012 Touch-up Booth

What to do	Why to do it
Material Usage: less than or equal to 0.2305 tons/day (calculated daily) total GP 004 coatings usage.	Minn. R. 7009.0020
Solids Content: less than or equal to 85 percent by weight for all coatings used in GP 004 emission units.	Minn. R. 7009.0020
<p>Determination of Solids Content of Coatings: Solids content shall be determined by the Environmental Data Sheet (EDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used, except as specified below. If the EDS or MSDS provides a material content range, the highest number in the range shall be used in all calculations.</p> <p>In addition, the Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for solids content determination, the data obtained shall supersede the EDS or MSDS.</p> <p>Maintain a log of the solids content data of each coating used. Solids content data shall be entered into the log prior to the use a coating.</p>	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping - Coating Usage Per Day: Using the daily paint mix system report (referenced under GP 001), once each day calculate the tons of coating used by the GP 004 emission units during the previous day. Record all calculations upon completion of the calculation.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item:** EU 002 Primer Booth

**Associated Items:** CE 001 Mat or Panel Filter

GP 001 Facility Emission Limits

GP 002 Industrial Process Equipment Requirements

SV 001

SV 002

What to do	Why to do it
Material Usage: less than or equal to 0.991 tons/day (calculated daily) total coatings usage.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
Solids Content: less than or equal to 90.7 percent by weight as applied, for all coatings used at this emission unit.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
<p>Determination of Solids Content of Coatings: Solids content shall be determined by the Environmental Data Sheet (EDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used, except as specified below. If the EDS or MSDS provides a material content range, the highest number in the range shall be used in all calculations.</p> <p>In addition, the Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for solids content determination, the data obtained shall supersede the EDS or MSDS.</p> <p>Maintain a log of the solids content data of each coating used, showing the calculated solids content of the coating, as applied. Solids content data for a coating shall be entered into the log prior to use of the coating.</p>	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping - Coating Usage Per Day: the Permittee shall maintain a log that records the gallons and the (calculated) tons of each coating material used at EU 002. The log shall be updated at the end of each shift and each calendar day, and shall show the sum of coatings used (in tons) for the entire calendar day. Record all calculations upon completion of the calculation.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item:** EU 004 Undercoat Booth

**Associated Items:** CE 002 Mat or Panel Filter

GP 001 Facility Emission Limits

GP 002 Industrial Process Equipment Requirements

SV 003

SV 004

What to do	Why to do it
Material Usage: less than or equal to 0.120 tons/day (calculated daily) total coatings usage.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
Solids Content: less than or equal to 61.3 percent by weight for all coatings used at this emission unit.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
<p>Determination of Solids Content of Coatings: Solids content shall be determined by the Environmental Data Sheet (EDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used, except as specified below. If the EDS or MSDS provides a material content range, the highest number in the range shall be used in all calculations.</p> <p>In addition, the Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for solids content determination, the data obtained shall supersede the EDS or MSDS.</p> <p>Maintain a log of the solids content data of each coating used. Solids content data for a coating shall be entered into the log prior to use of the coating.</p>	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping - Coating Usage Per Day: the Permittee shall maintain a log that records the total tons of coating material used at EU 004 each calendar day. The Permittee shall weigh the coating containers before and after each day of operation to determine the net coating usage per calendar day. Record all calculations upon completion of the calculation.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item:** EU 006 Paint Prep

**Associated Items:** CE 010 Bag filter on sander  
 GP 001 Facility Emission Limits  
 GP 002 Industrial Process Equipment Requirements  
 SV 005

What to do	Why to do it
Production Limit: not to exceed 4.0 coaches per calendar day.	Minn. R. 7009.0020 and Minn. R. 7009.0080: Minn. R. 7007.0800, subp. 2
Recordkeeping - Coach Production: The Permittee shall maintain a log of the number of coaches processed through EU 006 each calendar day. The log shall be updated at the end of each shift.	Minn. R. 7009.0020 and Minn. R. 7009.0080; Minn. R. 7007.0800, subp. 5
Operate and maintain control equipment to achieve a control efficiency for Particulate Matter < 10 micron: greater than or equal to 99.0 percent control efficiency	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020
Operate and maintain control equipment to achieve a control efficiency for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Title I Condition: to avoid classification as a major source under 40 CFR Sections 52.21
Operation and Maintenance of Panel Filter: The Permittee shall operate the bag filter at all times the sanding at EU 006 is in operation. The Permittee shall operate and maintain the bag filter according to the control equipment manufacturer's specifications.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020
Monitoring: The Permittee shall check the bag filter color indicator on a daily basis and clean out the bag when the indicator color is red. The Permittee shall maintain a written log of the inspections, bag cleaning, and any corrective action taken. Records shall be written after completion of each indicator check, bag cleaning, and corrective action.	Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; Minn. R. 7009.0020; Minn. R. 7007.0800, subps. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: EU 014 Standby Diesel Generator****Associated Items: SV 024**

<b>What to do</b>	<b>Why to do it</b>
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input . Potential to emit for this unit, using the AP-42 emissions factor, is 0.29 lb/MMBtu.	Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than 0.5 percent by weight	Minn. R. 7007.0800, subp. 2
Fuel Restriction: EU 014 fuel is restricted to distillate fuel oil.	Minn. R. 7007.0800, subp. 2
Recordkeeping - Hours of Operation: The Permittee shall record the number of hours the unit was operated at the end of each period of operation.	Minn. R. 7007.0800, subp. 5
Fuel Supplier Certification: obtain and maintain a fuel supplier certification for each shipment of diesel fuel, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subps. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: EU 015 Bus Engine Testing****Associated Items: SV 025**

<b>What to do</b>	<b>Why to do it</b>
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input . Potential to emit for this unit, using the AP-42 emissions factor, is 0.29 lb/MMBtu.	Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than 0.5 percent by weight	Minn. R. 7007.0800, subp. 2
Fuel Restriction: EU 015 fuel is restricted to distillate fuel oil.	Minn. R. 7007.0800, subp. 2
The Permittee shall not operate more than two bus engines per hour at any time. The Permittee shall maintain a written log of the number of bus engines operating during each hour, updated at the end of each shift.	Minn. R. 7005.0100, subp. 35a
Fuel Supplier Certification: obtain a fuel supplier certification for each shipment of diesel fuel, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item: EU 016 grit blasting -- not vented**

<b>What to do</b>	<b>Why to do it</b>
This is an enclosed process that shall not be vented outside or inside the facility when the process is in operation. If the Permittee proposes to vent this process, the Permittee must determine the impact due to the venting on the assumptions used in the dispersion modeling in Appendix I of this permit. Any venting of the process would be considered a modification.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item:** EU 017 Undercoating Booth No. 2

**Associated Items:** CE 011 Mat or Panel Filter

GP 001 Facility Emission Limits

GP 002 Industrial Process Equipment Requirements

SV 026

SV 027

What to do	Why to do it
Solids Content: less than or equal to 62.0 percent by weight for all coatings used at this emission unit.	Minn. R. 7009.0020; Minn. R. 7007.0800, subp. 2
<p>Determination of Solids Content of Coatings: Solids content shall be determined by the Environmental Data Sheet (EDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used, except as specified below. If the EDS or MSDS provides a material content range, the highest number in the range shall be used in all calculations.</p> <p>In addition, the Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for solids content determination, the data obtained shall supersede the EDS or MSDS.</p> <p>Maintain a log of the solids content data of each coating used. Solids content data for a coating shall be entered into the log prior to use of the coating.</p>	Minn. R. 7007.0800, subps. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

**Subject Item:** CE 009 Solvent recovery**Associated Items:** EU 013 Gun Cleaning

<b>What to do</b>	<b>Why to do it</b>
Control Equipment Operation: The operation of CE 009 is not required in order for the gun cleaning operation to meet applicable emission limits in GP 002. In addition, no emissions credit is applied to the annual facility Emissions Inventory calculations for the recovered solvent.	Minn. Stat. 116.07, subd. 4a

**TABLE B: SUBMITTALS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud  
Permit Number: 14100059 - 003

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor  
Permit Section  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor  
Compliance Determination Unit  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak  
Air and Radiation Branch  
EPA Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency  
Clean Air Markets Division  
1200 Pennsylvania Avenue NW (6204N)  
Washington, D.C. 20460

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Hexamethylene-1,6 diisocyanate (HDI) Emission Factor Submittal	due 180 days after 10/27/1998	Total Facility
Performance Test Notification (written)	due 30 days before Initial Performance Test	GP003
Performance Test Plan	due 30 days before Initial Performance Test	GP003
Performance Test Report - Microfiche Copy	due 105 days after Initial Performance Test	GP003
Performance Test Report	due 45 days after Initial Performance Test	GP003
Testing Frequency Plan	due 60 days after Initial Performance Test to measure control efficiency for PM10, lead, antimony, and barium sulfate. The Plan shall specify a testing frequency based on the initial test results and MPCA guidance. Future performance tests at year (12-month), 36-month, or 60-month intervals, or as applicable, shall be required upon MPCA approval of the Plan.	GP003

**TABLE B: RECURRENT SUBMITTALS**

11/27/01

Facility Name: New Flyer USA Inc - St Cloud

Permit Number: 14100059 - 003

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

## APPENDIX I: MODELING PARAMETERS

**Facility Name: New Flyer Industries**

**Permit Number: 14100059-003**

### Building Parameters:

The facility was characterized as a single area source having dimensions of 356.6 meters by 115.8 meters (i.e., building dimensions). The source release height was taken as 9.144 meters, which is the approximate roof height of the building.

Pollutant	HAP	Potential Emissions		Pollutant	HAP	Potential Emissions	
		tpy	lb/h			tpy	lb/h
CO		17.3963	14.6314	Carbon black		0.0387	0.0088
Lead Compounds	Y	0.0150	0.06608	Chromium VI	Y	0	0
NOx		30.4648	71.874	Chrysene		1.36E-06	4.20E-06
PM		18.172	6.509	Cobalt	Y	1.19E-04	2.70E-05
PM-10		18.172	6.509	Copper		1.47E-04	3.37E-05
SOx		0.9668	3.4748	Cumene	Y	61.6393	14.0729
VOC		97.5	1101.587	Dibenz[a,h]anthracene		1.94E-06	6.99E-06
				Dichlorobenzene		0.00021	4.75E-05
Acetaldehyde	Y	0.00228	9.13E-03	Diesel emissions			
Acetone		31.3278	7.1525	Ethyl benzene	Y	217.4455	49.6451
Acrolein	Y	0.000275	1.10E-03	Formaldehyde	Y	0.01651	0.01697
Antimony	Y	0.1114	12.42	Hexamethylene diisocyanate	Y	34.8867	7.965
Arsenic	Y	3.47E-05	7.92E-06	n-Hexane	Y	31.4197	7.2695
Barium		7.63E-04	1.74E-04	Indeno[1,2,3-CD]pyrene		1.43E-06	4.53E-06
Barium sulfate		0.08	4.641	Manganese	Y	0.03407	8.02E-03
Benzene (@0.1% of naphtha)	Y	0.24	1.0446	Mercury	Y	4.51E-05	1.03E-05
Benzo[a]anthracene		5.31E-06	2.01E-05	Methyl alcohol	Y	6.1102	1.395
Benzo[b]flouranthene		6.07E-07	1.25E-06	Methylene bisphenyl isocyanate (MDI) (Open Process Formula)	Y	3.58E-04	8.18E-05
Benzo[k]flouranthene		7.73E-07	4.27E-06	Methylcyclohexane		9.53964	2.178
Benzo[a]pyrene		7.67E-07	2.28E-06	Methyl ethyl ketone	Y	458.1951	104.6108
Beryllium	Y	2.08E-06	4.75E-07	Methyl isobutyl ketone	Y	9	63.4575
1,3-Butadiene	Y	0.000116	4.65E-04	Naphthalene		3.58E-04	1.03E-03
2-Butoxy ethanol		1.1589	0.2646	Nickel compounds	Y	0	0
Cadmium	Y	1.91E-04	4.36E-05	Phosphoric acid		0.376246	0.085901

	HAP	Potential Emissions		HAP	Potential Emissions
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## APPENDIX I: MODELING PARAMETERS

Pollutant		tpy	lb/h	Pollutant		tpy	lb/h
Polyisocyanate prepolymer		1.8156	0.4146	Ethane		0.538	0.123
Propylene glycol monomethyl ether				Ethyl acetate		0.2022	0.0462
Selenium		4.16E-06	9.50E-07	Ethyl alcohol		0.0111	0.0025
Toluene	Y	9	30	Ethyl-3-ethoxy-propanoate		8.23878	1.881
Vanadium		3.99E-04	9.11E-05	Fluoranthene		2.32E-05	9.07E-05
Xylenes	Y	9	10	Fluorene		8.74E-05	5.72E-04
Zinc compounds		25.654	5.8572	Glycol ester of hydrogenated rosin			
				n-Heptane		9.53964	2.178
<b>Non-COCs</b>				oxo-Heptyl acetate			
Acenaphthene		4.54E-06	1.70E-05	Hexane Isomers		0.4186	0.0956
Acenaphthylene		1.54E-05	6.02E-05	oxo-Hexyl acetate		433.62	99
Acetylacetone		105.37	24.057	Hydrocarbon resin			
Aliphatic amine		0.326	0.0744	Iron oxide		1.297	0.296
Aliphatic amine resin				Isopropyl alcohol		376.2192	85.895
Aliphatic hydrocarbons		3208.788	732.6	Lead chromate molybdate sulfate			
Alkyl polyoxyethylene glycol ether		12.5423	2.8635	Magnesium oxide		5.081	1.16
Aluminum oxide		0.1133	0.0259	Magnesium resinate			
Amorphous silica				1-Methoxy-2-propylacetate		216.81	49.5
Anthracene		9.16E-06	1.32E-05	Methyl (n-amyl) ketone		1813.32	414
Aromatic naphtha		285.1557	65.1041	3-Methylchloroanthrene		3.12E-07	7.13E-08
Benzo[g,h,l]-perylene		1.66E-06	5.87E-06	2-Methyl naphthalene		4.16E-06	9.50E-07
Benzotriazole UV absorbent		0.5687	0.1294	Mica		1.2315	0.2812
Butane		0.364	0.083	Molybdenum		1.91E-04	4.36E-05
2-Butoxyethyl acetate				Naphtha		97.5	111.2
Butyl acetate				Naphtha (stoddard solvent)		97.5	111.2
n-Butyl acetate		906.6805	207.0047	Nonylphenoxypoly (ethyleneoxy) ethanol		12.5423	2.8635
n-Butyl alcohol				Pentane		0.451	0.103
Calcium carbonate		20.33	4.64	Petroleum distillate		10.4191	2.3788
Calcium oxide				Petroleum resins			
7,12-Dimethyl benz[a]anthracene		2.78E-06	6.34E-07	Phenathrene		9.04E-05	3.51E-04
Diethylene triamine				Phenol-formaldehyde polymer			
Epoxy resin				Polyamide resin			
Ethoxylated lauryl alcohol		71.1114	16.2355	Polychloroprene		8.6108	1.9659

## APPENDIX I: MODELING PARAMETERS

Pollutant	HAP	Potential Emissions		Pollutant	HAP	Potential Emissions	
		tpy	lb/h			tpy	lb/h
Propane		0.278	0.063	Titanium dioxide		45.3348	10.35
Propylene		0.00768	0.0199	1,2,4-Trimethylbenzene		256.3693	58.5318
Pyrene		1.51E-05	2.83E-04	Trisodium phosphate		0.162351	0.711097
Quartz		1.0799	0.2461	Vinyl resin			
Sodium acid pyrophosphate		0.752488	0.171801	VM&P naphtha		50.73	1.583
Styrene-butadiene polymer				Zinc resinate			
Talc							

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 14100059-003**

This technical support document is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

**1. General Information**

1.1. Applicant and Stationary Source Location

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 3711)
New Flyer USA, Inc. 6200 Glenn Carlson Drive St. Cloud, MN 56301  Contact: Ken Day Phone: 320-203-4928	New Flyer USA, Inc. 6200 Glenn Carlson Dr St. Cloud, MN 56301 Stearns County

1.2. Description Of The Facility

New Flyer currently operates a bus manufacturing facility in St. Cloud, Minnesota. The plant currently consists of two manufacturing lines. The facility currently has one complete build line for bus assembly from parts (A-line) and one finishing line to complete partially assembled buses (B-line) shipped from the New Flyer facilities located in Winnipeg, Canada and Crookston, Minnesota. The facility began operating in September 1999.

1.3 Description of the Activities Allowed By This Permit Action

New Flyer has developed a new bus design, the Invero, which will tentatively be manufactured at the St. Cloud facility. This bus will be partially manufactured on the A-line and completed on the B-line. To provide for greater operational flexibility to allow movement of the new Invero bus bodies to the B-line for completion, a second undercoat booth (EU 017) is proposed for installation in the A-line area. The new booth is nearly identical to the existing undercoating booth (EU 004). The new undercoating booth will have two exhaust stacks (SV 026 and SV 027). Emissions from the booth are controlled by panel filters (CE 011).

1.4. Facility Emissions

Total facility-wide limited potential to emit remains unchanged with this permit action. Potential to emit is shown below:

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Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions*	18.2	18.2	0.963	30.5	17.4	97.5	0.0150	9.0	24.0
Total Facility Actual Emissions (1999 Data)	0.82	0.82	0.18	0.88	2.89	20.39	None Reported	NR*	NR*

\* Not Reported (not required to be reported).

Table 2. Permit Action Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		X	
<b>NAAR Not Applicable</b>			
Part 70 Permit Program		X	
Part 63 NESHAPs (National Emission Standards for Hazardous Air Pollutants for Source Categories)		X	

\* Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, 40 CFR pt. 70 and 40 CFR pt. 63.

### 1.5 Potential Emissions from New Booth

Maximum potential emissions from the new booth are shown below (calculations are shown in Section 3):

The potential to emit of each pollutant from the new undercoat booth (EU 017) is summarized below (calculations are shown in Section 3 of this document):

Table 3. Potential Emissions from the New Booth (EU 017)

Pollutant	Maximum Emission Rate (lb/hr)
Volatile Organic Compounds (naphtha)	7.88
PM/PM <sub>10</sub>	0.38
Benzene (@ 0.1% of naphtha)	0.0077

The undercoat booth will be included in a group of emission sources which are subject to Title I Conditions restricting annual emissions of HAPs and VOCs. Since the undercoat booth will be included in a group of emission sources subject to Title I Conditions, the amendment is classified as a major amendment.

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## 2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

### Regulatory Overview of Units Affected by the Modification

Table 4. Regulatory Overview

EU, GRP, or SV #	Applicable Regulations	Comments
GP001 (includes EU 017)*	40 CFR 52.21; 40 CFR Section 70.2	Prevention of Significant Deterioration (PSD) and the Part 70 Operating Permit Program. Limits taken to avoid PSD and Part 70 for all non-combustion emissions of VOC and PM/PM <sub>10</sub> . This amendment does not change these limits.
	40 CFR 63.40 to 63.44;; 40 CFR 70.2	National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAPs) and the Part 70 Operating Permit Program. Limits taken to avoid the NESHAPs and Part 70 permitting programs on all non-combustion emissions of HAPs (both total and individual HAPs). This amendment does not change these limits.
	Minn. R. ch. 7009	Ambient Air Quality Standards. The permit contains limits on lead and PM/PM <sub>10</sub> derived from computer dispersion modeling. This amendment does not change these limits.
	Minn. R. 7007.0800, subp. 2	Limits to protect human health and the environment. Limits on air toxics (chromium, nickel, antimony, barium sulfate, benzene, toluene and xylene) based on computer dispersion modeling. This amendment does not change these limits.
GP 002 (includes EU 017)**	Minn. R. 7007.0715, subp. 1(A) and 1(B)	Standards of Performance for New Industrial Process Equipment.
GP 003 (Panel Filters, includes CE 011)	40 CFR 52.21; 40 CFR 70.2; Minn. R. ch. 7009; Minn. R. 7007.0800, subp. 2	PSD, Part 70, Ambient Air Quality Standards, and limits to protect human health and the environment. Control efficiency and other operating parameter requirements to limit PM/PM <sub>10</sub> , lead, antimony and barium sulfate PTE. This amendment does not change these requirements.
	Minn. R. ch. 7017	Performance Tests. Test in accordance with the rules using EPA approved test methods. This amendment does not change these requirements.

\* All non-combustion equipment.

\*\* All process equipment.

## 3. Technical Information

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### 3.1 Potential Emissions from the New Undercoat Booth

The permit currently requires a 94% control efficiency for the existing booths. This is based on an assumed 100% capture efficiency for the booths. Testing conducted on April 25, 2000 shows that the existing undercoat booth does not meet the definition of a permanent total enclosure. Since the new undercoat booth is essentially identical in design to the existing undercoat booth, a 100% capture efficiency cannot be assumed for the new booth. For the purposes of calculating potential emissions from the new undercoat booth, it is assumed that the capture efficiency is 80%, the PM/PM<sub>10</sub> collection efficiency is 92% and the transfer efficiency is 80%. Emissions are calculated as follows:

$$\text{PM/PM}_{10} = [21.0 \text{ gal/bus} * (7.81 \text{ lb/gal})(1 \text{ bus/4 hrs})(61.54\% \text{ solids})(1-0.80)(1-0.80)] + [21.0 \text{ gal/bus}(7.81 \text{ lb/gal})(1 \text{ bus/4 hrs})(61.54\% \text{ solids})(1-0.80)(0.80)(1-0.92)] = \underline{1.33 \text{ lb/hr}}$$

$$\begin{aligned} \text{VOC (naphtha, Coratube usage)} &= 9.3 \text{ gal/bus} * (7.33 \text{ lb/gal})(1 \text{ bus/4 hrs})(45\% \text{ VOC}) = 7.67 \text{ lb/hr} \\ \text{VOC (Corashield usage)} &= 21.0 \text{ gal/bus}(0.04 \text{ lb/gal})(1 \text{ bus/4 hrs}) = 0.21 \text{ lb/hr} \end{aligned}$$

$$\text{Total VOC emissions} = (7.67+0.21) \text{ lb/hr} = \underline{7.88 \text{ lb/hr}}$$

$$\text{Benzene (@ 0.1\% of naphtha)} = 7.67 \text{ lb/hr}(0.1\%) = \underline{0.0077 \text{ lb/hr}}$$

\* Maximum Corashield usage per bus.

\*\* Maximum Coratube usage per bus. Coratube contains 45% VOCs (naphtha). Naphtha is assumed to consist of 0.1% benzene.

The Coratube product is applied directly into the frame tubes, so it is assumed that no particulate matter emissions are generated from the application of the Coratube product.

### 3.2 Compliance with Minn. R. 7011.7015

Emissions will be vented to SV 026 and SV 027, each with an expected flow rate of 16,000 actual cubic feet per minute (acfm). Since the gas will be exhausted at 70 degrees F, the flow for the stack in acfm will be assumed to be equal to the stack flow in dry standard cubic feet per minute (dscfm). Under Minn. R. 7011.7015, an allowable PM concentration is calculated as follows:

$$\text{Allowable PM Concentration} = 1.7627(32,000)^{-0.3241} = 0.061 \text{ gr/dscf}$$

$$\begin{aligned} \text{Allowable PM Emission Rate} &= 0.061 \text{ gr/dscf}(32,000 \text{ dscfm})(60 \text{ min/hr})(1 \text{ lb}/7,000 \text{ gr}) \\ &= 16.73 \text{ lb/hr} \end{aligned}$$

The expected PM emission rate is 1.33 lb/hr, which is well below the allowable emission rate of 16.73 lb/hr.

### 3.3 Air Toxics Emissions Increase

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Assuming the naphtha contains 0.1% benzene, the addition of the undercoat booth causes a maximum hourly increase of benzene emissions of 0.0077 lb/hr (see above calculations). The emission sources in GP 001 of the permit are limited to 0.24 ton/year of benzene emissions. Since the undercoat booth is included in this group of emission sources, addition of the undercoat booth will only result in an increase in maximum hourly benzene emissions and will not result in an increase in maximum annual benzene emissions. Since maximum annual benzene emissions will not increase, the maximum annual average benzene concentration in the ambient air is not expected to increase. Therefore, only the 1-hour average (acute) benzene ambient impact will be assessed.

A Risk Management Screening Analysis (RMSA) was completed for this facility in conjunction with the initial construction permit for the facility. The RMSA used a screening level dispersion model that used worst case meteorology and a simplified representation of the source. Since the screening analysis was completed by assuming that all emissions are emitted from a single stack, the 1-hour unit impact of 444.4 ug/m<sup>3</sup>/g/s can be used to calculate the increase in the 1-hour average benzene concentration due to the increase in benzene emissions from the undercoat booth. The pre-modification RMSA results are shown below:

RMSA Results for Benzene (Pre-Modification):

Maximum benzene emission rate (pre-modification) = 1.0369 lb/hr

Maximum 1-hour benzene concentration (pre-modification) = 58.1 ug/m<sup>3</sup>

Acute Toxicity Number = 160 ug/m<sup>3</sup>

Toxicity Endpoint = Immune System

Hazard Quotient = (58.1 ug/m<sup>3</sup>)/(160 ug/m<sup>3</sup>) = 0.363

Hazard Index = 0.363\*

\* Benzene was the only air toxic with the immune system as a toxicity endpoint, so the hazard quotient is equal to the hazard index.

A revised hazard quotient and hazard index due to the increased benzene emissions can be calculated as follows:

Benzene emission rate (post-modification) = 1.0369 lb/hr + 0.0077 lb/hr = 1.0446 lb/hr  
= 0.1316 g/s

Max. 1-hour benzene concentration = 0.1316 g/s(444.4 ug/m<sup>3</sup>/g/s) = 58.5 ug/m<sup>3</sup>

Hazard Quotient = (58.5 ug/m<sup>3</sup>)/(160 ug/m<sup>3</sup>) = 0.366

Hazard Index = 0.366

As can be seen from the above, the hazard index remains below 1.0 after the modification.

### 3.4 Compliance with the Ambient Air Quality Standards

The installation of the undercoat booth will also result in increased emissions of PM/PM<sub>10</sub>. The maximum PM/PM<sub>10</sub> emission rate from the undercoat booth is 1.33 lb/hr. The results of the RMSA for PM<sub>10</sub> are shown below:

RMSA Results for PM<sub>10</sub> (Pre-Modification):

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Maximum PM<sub>10</sub> emission rate (pre-modification) = 5.179 lb/hr (12.342 ton/yr)\*

Maximum 24-hour PM<sub>10</sub> concentration (pre-modification) = 116.0 ug/m<sup>3</sup>

Maximum Annual PM<sub>10</sub> concentration (pre-modification) = 12.6 ug/m<sup>3</sup>

\* Permit restrictions limit annual PM<sub>10</sub> emissions to 12.342 ton/year.

Post-modification maximum ambient PM<sub>10</sub> concentrations can be calculated as follows:

Undercoat booth PM<sub>10</sub> emission rate = 1.33 lb/hr (5.83 ton/year)

Maximum PM<sub>10</sub> emission rate (post-modification, lb/hr) = (5.179+1.33) lb/hr = 6.509 lb/hr  
= 0.8201 g/s

Maximum 24-hr average PM<sub>10</sub> concentration = 0.8201 g/s(444.4 ug/m<sup>3</sup>/g/s)(0.4) = 145.8 ug/m<sup>3</sup>

Maximum PM<sub>10</sub> emission rate (post-modification, tpy) = (12.342\*+5.83) tpy = 18.172 ton/year

Maximum PM<sub>10</sub> annual average emission rate (post-modification, g/s)

= 18.172 ton/year(2000 lb/ton)(1 yr/8,760 hr)(1 hr/3,600 s)(453.59 g/lb) = 0.5228 g/s

Maximum annual average PM<sub>10</sub> concentration = 0.5228 g/s(444.4 ug/m<sup>3</sup>/g/s)(0.08)  
= 18.6 ug/m<sup>3</sup>

\* Restrictions in the current permit limit PM/PM<sub>10</sub> emissions to 12.342 tpy.

The Minnesota Ambient Air Quality Standards for PM<sub>10</sub> are 150 ug/m<sup>3</sup> as a maximum 24-hour average concentration (one exceedance allowed per calendar year) and 50 ug/m<sup>3</sup> as an annual arithmetic mean. Expected PM<sub>10</sub> concentrations are calculated to be 145.8 ug/m<sup>3</sup> (24-hour average concentration) and 18.6 ug/m<sup>3</sup> (annual average PM<sub>10</sub> concentration). Based upon these results, PM<sub>10</sub> ambient concentrations are expected to be below the Minnesota Ambient Air Quality Standards for PM<sub>10</sub>.

### 3.5 Changes to Modeling Parameters Listed in the Permit

The permit currently lists the modeling parameters for the facility as an appendix. As a result of this permit action, the parameters have been changed as follows:

Pollutant	Potential Emissions (pre-modification)		Potential Emissions (post-modification)	
	tpy	lb/hr	tpy	lb/hr
PM	12.342	5.179	18.172	5.559
PM-10	12.342	5.179	18.172	5.559
VOC	97.5	1093.707	97.5	1101.587
Benzene	0.24	1.0369	0.24	1.0446
Naphtha	97.5	103.5	97.5	111.2
Naphtha (stoddard solvent)	97.5	103.5	97.5	111.2

## 4. Conclusion

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Based on the information provided by New Flyer USA, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14100059-003 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Craig Thorstenson, David Crowell  
Peer Review: Trent Wickman

Attachments: None

Permit Action Number:  
Date: 2/23/2004