STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 012008-006 Project Number: 2007-09-035
Parent Company: Sabreliner Corporation
Parent Company Address: 7733 Forsyth Boulevard, Suite 1500
St. Louis, MO 63105
Installation Name: Sabreliner Corporation Perryville
Installation Address: 1390 Highway H, Perryville, MO 63775
Location Information: Perry County, S31, T36N, R11E

Application for Authority to Construct was made for:
Installation of a paint booth. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.

☐ Standard Conditions (on reverse) are applicable to this permit.
☒ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

JAN 23 2008

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES
STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the department’s Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant sources(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located with 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources’ personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.
SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority.”

Sabreliner Corporation Perryville
Perry County, S31, T36N, R11E

1. Emission Limitations for Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

   A. Sabreliner Corporation Perryville shall emit less than 40 tons of VOCs from surface coating operations occurring in Hangar 2 in any consecutive 12-month period.

   B. Sabreliner Corporation Perryville shall emit less than ten tons individually or 25 tons combined of HAPs from the entire installation in any consecutive 12-month period.

   C. Attachments A, B and C, or equivalent forms approved by the Air Pollution Control Program, shall be used to demonstrate compliance with Special Conditions 1.A. and 1.B. Sabreliner Corporation Perryville shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all hazardous materials and VOCs used at this installation.

   D. Sabreliner Corporation Perryville shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition 1.C. indicate that the source exceeds the limitations of Special Condition 1.A. or Special Condition 1.B.

2. Sabreliner Corporation Perryville shall control emissions from the paint booths by using a three-stage filtering system (blanket, panel and bag) as specified in the permit application. The filtering system shall be operated and maintained in accordance with the manufacturer's specifications. The filtering system shall be equipped with a gauge or meter, which indicates the pressure drop across the control device.
SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them. Replacement filters shall be kept on hand at all times. The panel filters and bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

3. Sabreliner Corporation Perryville shall monitor and record the operating pressure drop across the filtering system at least once every 24 hours. The operating pressure drop shall be maintained within the manufacturer's specifications.

4. Sabreliner Corporation Perryville shall maintain an operating and maintenance log for the filtering system which shall include the following:

   A. Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and

   B. Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

5. Sabreliner Corporation Perryville shall keep surface coating materials in sealed containers whenever the materials are not in use. Sabreliner Corporation Perryville shall provide and maintain suitable, easily read, permanent markings on surface coatings used at this installation.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2007-09-035
Installation ID Number: 157-0002
Permit Number:

Sabreliner Corporation Perryville Complete: September 26, 2007
17452 Bartels Industrial Drive Reviewed: January 2008
Perryville, MO  63775

Parent Company: Perryville, MO  63775
Sabreliner Corporation
7733 Forsyth Blvd.
Suite 1500
St. Louis, MO  63105

Ste. Genevieve County, S32, T37N, R10

REVIEW SUMMARY

• Sabreliner Corporation Perryville has applied for authority to install a paint booth.

• Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are hexamethylene diisocyanate (HDI), xylenes and ethyl benzene.

• A make-up air heater will create Nitrogen Oxides (NOx) emissions from natural gas combustion.

• None of the New Source Performance Standards (NSPS) apply to the proposed equipment.

• With regard to the the Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart GG, National Emission Standards for Aerospace Manufacturing and Rework Facilities - in May 1999 Sabreliner submitted a protective notification to the Air Pollution Control Program stating that they were in compliance with the MACT standard. In that notification Sabreliner also stated that they were a minor source of HAPs. In 2000 Sabreliner was issued a construction permit that had federally enforceable conditions to limit HAPs to below major levels, however that permit was rescinded in 2002. This permit reinstates the HAP emission limitations.

• A three-stage filtering system (blanket filter, panel filter and then a bag filter) will be used to control particulate emissions. The overall control efficiency for Particulate Matter less than ten microns in diameter (PM_{10}) is estimated to be 99%.

• This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of NOx,
PM$_{10}$, HAPs and VOC are below de minimis levels.

- This installation is located in Perry County, an attainment area for all criteria air pollutants.
- This installation is not on the list of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Approval of this permit is recommended with special conditions.

**INSTALLATION DESCRIPTION**

Sabreliner Corporation Perryville is an existing installation that performs maintenance, refurbishing and repair of business and military aircraft in Perryville, Missouri. The installation is located at the Perryville Municipal Airport, approximately 1.5 miles west of the intersection of Highways H and 51. Pollutant-emitting activities at this installation include paint stripping, primer and top-coat application (aircraft and aircraft parts), parts washing and engine testing.

In 2000 construction permit number 022001-013 was issued to Sabreliner Corporation Perryville for a paint booth, however this permit was rescinded in 2002 – see project file 2002-01-025 for further detail. There are no other previously-issued construction permits for this installation.

The basic operating permit for this installation expired in 2006. If it has not already done so, Sabreliner is required to submit an operating permit renewal application.

**PROJECT DESCRIPTION**

Sabreliner Corporation Perryville is adding a new paint booth in Hangar 2 to paint small aircraft (currently Beech T-34C military training aircraft). The new paint booth is described as follows:

- AEI Drive Through Semi Downdraft Paint Booth (Model #AMD-401332-PDT)
  - Interior Width: 40 ft.
  - Interior height: 13 ft.
  - Depth: 32 ft.
  - Filtration: 3-Stage (blanket, panel and bag filters)

The paint booth is equipped with a Rupp 52,000 CFM make-up air heater. The specifications for the make-up air heater indicate a maximum natural gas firing rate of 7.02 MMBTU/HR.

DeVillbiss high-volume low-pressure spray guns will be utilized in the paint booth. The spray guns are capable of delivering as much as 7.5 gallons per hour, but due to operational constraints, such as drying time and manpower, the maximum hourly
application rate for the new paint booth is 0.25 gallons per hour. Anticipated annual usage of surface coatings for this paint booth is less than 400 gallons.

EMISSIONS/CONTROLS EVALUATION

The emissions of concern for this project are primarily VOCs and HAPs. There will also be small quantities of PM$_{10}$ and NO$_x$ emitted. The xylenes, ethyl benzene and HDI in the surface coating materials are classified as VOCs and as HAPs. Uncontrolled potential emission calculations assume that all of the xylenes, ethyl benzene and HDI present in the surface coating materials are emitted.

Table 1: Emissions Summary (tons per year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>N/D</td>
<td>0.21</td>
<td>N/D</td>
<td>N/A</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>40.0</td>
<td>N/D</td>
<td>0.24</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>40.0</td>
<td>N/D</td>
<td>0.27</td>
<td>2.93</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>&gt;40, &lt; 250</td>
<td>44.3</td>
<td>5.48</td>
<td>40.0*</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>N/D</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Xylenes</td>
<td>10.0</td>
<td>&lt;10.0</td>
<td>N/D</td>
<td>0.90</td>
<td>10.0**</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>10.0</td>
<td>&lt;10.0</td>
<td>N/D</td>
<td>0.31</td>
<td>10.0**</td>
</tr>
<tr>
<td>HDI</td>
<td>10.0</td>
<td>&lt;10.0</td>
<td>N/D</td>
<td>0.018</td>
<td>10.0**</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>10.0/25.0</td>
<td>&lt;25.0</td>
<td>N/D</td>
<td>1.23</td>
<td>25.0**</td>
</tr>
</tbody>
</table>

N/A = Not Applicable; N/D = Not Determined

* Limitation is for this project

** Installation wide limitation

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section 5 of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.

APPLICABLE REQUIREMENTS

Sabreliner Corporation Perryville shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.
GENERAL REQUIREMENTS

- Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110
- Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170
- Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220
- Restriction of Emission of Odors, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400
- Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating, 10 CSR 10-3.060

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required, I recommend permit issuance with special conditions.

______________________________  ______________________________
Stephen R. Jaques, P.E.      Date
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 25, 2007, received September 6, 2007, designating Sabreliner Corporation as the owner and operator of the installation.
- Southeast Regional Office Site Survey, dated September 27, 2007.
**Attachment A – Hangar 2 Paint Booth - VOC Compliance Worksheet**

Sabreliner Corporation - Perryville  
Ste. Genevieve County, S31,T36N, R11E  
Project Number: 2007-09-035  
Installation ID Number: 157-0002  
Permit Number: __________

This sheet covers the VOC from (month, year) to (month, year).

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint Booth Material Identification</td>
<td>Monthly Amount of Material Used (gallons)</td>
<td>Density of Material (lb./gal.)</td>
<td>% Weight VOC Material (% wt)</td>
<td>VOC Emissions (tons)</td>
<td>VOC 12-month Total (Tons)</td>
</tr>
</tbody>
</table>

1. Column C = \( \rho_{H_2O} \times SG \); \( \rho_{H_2O} = 8.34\text{lb/gal} \), SG (specific gravity) is obtained from MSDS.
2. Column D = Percentage by weight of the VOC present in the material; obtained from MSDS.
3. Column E = \( \left( \frac{ColumnB \times ColumnC}{2000} \times \frac{ColumnD}{100} \right) \)
4. Column F = Rolling 12-month total from Column E. **Total shall not exceed 40 tons in any consecutive 12-Month period.**
Attachment B – Installation-Wide - Individual HAP Compliance Worksheet

Sabreliner Corporation - Perryville
Ste. Genevieve County, S31,T36N, R11E
Project Number: 2007-09-035
Installation ID Number: 157-0002
Permit Number: __________

This sheet covers the HAP __________ from __________ to __________.
(month, year)   (month, year)

Copy this sheet as needed.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint Booth Material Identification</td>
<td>Monthly Amount of Material Used (gallons)</td>
<td>Density of Material (lb./gal.)</td>
<td>% Weight HAP of Material (% wt)</td>
<td>HAP Emissions (tons)</td>
<td>HAP 12-month Total (Tons)</td>
</tr>
</tbody>
</table>

1. Column C = \( \rho_{H_{2}O} \times SG \); \( \rho_{H_{2}O} = 8.34 \text{lb/gal} \), SG (specific gravity) is obtained from MSDS.
2. Column D = Percentage by weight of the HAP present in the material; obtained from MSDS.
3. Column E = \( \left( \frac{ColumnB \times ColumnC}{2000} \times \frac{ColumnD}{100} \right) \)
4. Column F = Rolling 12-month total from Column E. **Total shall not exceed 10 tons in any consecutive 12-Month period.**
Attachment C – Installation-Wide Aggregate HAP Compliance Worksheet in a 12-Month Period

Sabreliner Corporation - Perryville  
Ste. Genevieve County, S31,T36N, R11E  
Project Number: 2007-09-035  
Installation ID Number: 157-0002  
Permit Number: ______________

This sheet covers the period from _____________ to ______________.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAP Identification</td>
<td>HAP Emissions (Tons/12-Month period)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Column B = Emissions for a specific HAP, obtained from Attachment A
2. Total = Sum of Column B; total shall not exceed 25 tons in any consecutive 12-Month period
Mr. Terry Miner  
Director of Environmental Health and Safety  
Sabreliner Corporation  
7744 Forsyth Boulevard, Suite 1500  
St. Louis, MO 63105  

RE: New Source Review Permit - Project Number: 2007-09-035  

Dear Mr. Miner:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, “Review of Application for Authority to Construct,” is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Mr. Steve Jaques at the department’s Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief  

KBH: sjn

Enclosure

c: Southeast Regional Office  
PAMS File 2007-09-035  
Permit Number: