

STATE OF MISSOURI

PERMIT BOOK



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: **092010-113** Project Number: 2010-03-068

Parent Company: Platinum Aerostructures

Parent Company Address: 1200 E. Highland, Nevada, MO 64772

Installation Name: Platinum Aerostructures

Installation Number: 217-0046

Installation Address: 1200 E. Highland, Nevada, MO 64772

Location Information: Vernon County, S34, T36N, R31W

Application for Authority to Construct was made for:  
Installation of one paint booth (EP03). 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.

SEP 30 2010

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 Departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 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 source(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.

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## 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."*

Platinum Aerostructures  
Vernon County, S34, T36N, R31W

1. HAP Emission Limitations
  - A. Platinum Aerostructures shall emit less than 10.0 tons of glycol ethers from the entire installation in any consecutive 12-month period. The emissions points at the time of this permit that emit glycol ethers consist of three paint booths: Bond Prime Booth #1 (EP01), Repair Paint Booth (EP02) and Bond Prime Booth #2 (EP03).
  - B. Platinum Aerostructures shall emit less than 0.10 tons of phenol (CAS# 108-95-2) from Bond Prime Booth #2 (EP03) in any consecutive 12-month period.
  - C. Attachment A, Attachment B or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A and 1.B. Records may be kept in either written or electronic form. Platinum Aerostructures shall maintain all records required by this permit for not less than 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 materials used in Bond Prime Booth #2 (EP03).
  - D. Platinum Aerostructures shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which the records from Special Condition Number 1.C indicate that the source exceeds the limitation of Special Condition Number 1.A or 1.B.
2. Restrictions on Paint Use
  - A. The following materials are allowed for use in Repair Paint Booth (EP03).

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**SPECIAL CONDITIONS:**

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

**Table 1: Materials Allowed in EP03**

Paint Type
AL2000
BR 6747-1
BR 127
EC-3917
EC-3960
EW-5000
EA 9210H
EA 9257

- B. Platinum Aerostructures shall seek approval from the Air Pollution Control Program if they are to use any coatings other than those listed in Table 1.
3. Control Device & Operational Requirements
- A. Platinum Aerostructures shall control emissions from the spray gun using a paint booth equipped with high efficiency filters. The paint booth (EP03) and high efficiency filters shall be maintained in accordance with the manufacturer's specifications. Replacement filters shall be kept on hand at all times.
  - B. Only one spray gun may be operated in the paint booth (EP03) at a time.
  - C. Any new spray gun shall not exceed a spray rate (MHDR) of 4.69 gallons per hour. Platinum Aerostructures shall maintain manufacturer data stating the design spray rate of any spray gun used in this booth.
4. Solvent Cloths
- Platinum Aerostructures shall keep the solvents and cleaning solutions in sealed containers whenever the materials are not in use. Platinum Aerostructures shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers used with this equipment.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2010-03-068  
Installation ID Number: 217-0046  
Permit Number:

Platinum Aerostructures  
1200 E. Highland  
Nevada, MO 64772

Complete: March 23, 2010

Parent Company:  
Platinum Aerostructures  
1200 E. Highland  
Nevada, MO 64772

Vernon County, S34, T36N, R31W

REVIEW SUMMARY

- Platinum Aerostructures has applied for authority to construct an additional paint booth (EP03).
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are glycol ethers (CAS# 2807-30-9, CAS #109-86-4 and CAS #110-80-5), formaldehyde (CAS# 50-00-0), methanol (CAS# 67-56-1), zinc chromate, strontium chromate (CAS# 7789-06-2), barium chromate (CAS# 10294-40-3), and phenol (CAS# 108-95-2).
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart GG, *National Emission Standards for Aerospace Manufacturing and Rework Facilities* does not apply to the proposed equipment since individual and aggregate HAPs are below de minimis levels. Subpart HHHHHH, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources* applies to the spray application coatings containing chromium (EP01, EP02, and EP03).
- High-efficiency paint filters are being used to control the PM<sub>10</sub> and particulate HAP emissions (strontium chromate, barium chromate and zinc chromate) from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all criteria pollutants are below de minimis levels. Phenol has been conditioned to below its' respective Screen Modeling Action Levels (SMALs). Glycol ethers have been conditioned to below 10.0 tons per year for the installation.
- This installation is located in Vernon County, an attainment area for all criteria pollutants.

- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels and the individual HAP's respective Screen Modeling Action Levels (SMALs).
- Emissions testing are not required for the equipment being permitted in this project.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Platinum Aerostructures (formerly known as Precision Aero Services) located in Nevada, Missouri manufacturers and repairs aircraft components. This installation consists of two paint booths, a 10-tank phosphoric acid anodize etch line, portable hot bonders, electric ovens, an electric autoclave, media blasting and sanding operations and an emergency generator. The paint booths, the media blasting and sanding operation, and the emergency generator are the emission sources at this installation.

The paint booths were constructed prior to receipt of a permit from Missouri Department of Natural Resources. Obtaining this permit is part of a remedial action required by the Air Pollution Control Program. The following permits have been issued to Platinum Aerostructures from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
Not Issued <sup>1</sup>	Construction of two paint booths.

<sup>1</sup>Project 2008-01-007 is being issued at the same time as this permit.

### PROJECT DESCRIPTION

This permit is for the addition of a third paint booth, Bond Prime Booth #2 (EP03). The booth is allowed to have one spray gun in operation at a time and contains a high efficiency filter to control PM<sub>10</sub> emissions. The spray gun has an unadjusted maximum hourly design rate (MHDR) of 4.69 gallons per hour. However, due to restraints outside of the painting operation, the total spraying time is estimated to be a maximum of one (1) hour per 9.5 hour paint cycle. Thus, the adjusted MHDR for the spray gun is 0.49 gallons of coating per hour.

### EMISSIONS/CONTROLS EVALUATION

The emissions of concern from this project are PM<sub>10</sub>, VOCs and HAPs. The emissions for the proposed spray booth were estimated by using a mass balance approach using the MSDSs and the MHDR for the gun as provided by the applicant.

- 100% of the VOC and volatile HAP content of the materials used in the paint booth are assumed to be emitted into the atmosphere.
- PM<sub>10</sub> emissions for the application of the materials were evaluated based on the

solids content of the paint and transfer efficiency from air-atomized spray application. A weighted transfer efficiency of 44% was assumed based on 85% of the materials being flat surfaces and the remaining 15% being details. If not specifically stated in the MSDS, the solids content of the material was estimated by taking the density of the material and subtracting out the volatile content and assuming the remainder to be PM<sub>10</sub>. The high-efficiency filters have a minimum PM<sub>10</sub> control efficiency of 99.5% and a minimum particulate matter (PM) control efficiency of 99.76%. Particulate HAPs were calculated in the same manner as PM<sub>10</sub> except that the content of the specific HAP was used instead of the solid content and the PM control efficiency was used instead of PM<sub>10</sub> control efficiency.

- Emissions were calculated based on the restrictions of paint to be used in the paint booth as outlined in Special Condition 2. The highest potential emissions for total VOCs, combined HAPs, individual HAPs and PM<sub>10</sub> were calculated for each coating used in the paint booth. The worst case potential emissions for each pollutant were used as the potential emissions for the paint booth.

The following table provides an emissions summary for this project. The existing potential emissions are based on the Emissions Summary from Project No. 2008-01-007. Existing actual emissions were derived from the 2009 Emissions Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the additional paint booth, assuming continuous operation (8,760 hours per year).

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels <sup>1</sup>	Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Potential Emissions of the Application	Project Conditioned Potential
PM <sub>10</sub>	15.0	0.65	N/A	0.022	N/A
<sup>4</sup> PM <sub>2.5</sub>	10.0	N/D	N/A	0.022	N/A
SOx	40.0	0.001	N/A	N/A	N/A
NOx	40.0	0.14	N/A	N/A	N/A
VOC	40.0	28.39	15.93	14.28	N/A
CO	100.0	0.12	N/A	N/A	N/A
Combined HAPs	25.0	12.84	6.96	5.03	N/A
Ethylbenzene	10.0	1.55	0.31	N/A	N/A
Formaldehyde	2.0	0.08	0.002	0.08	N/A
Glycol ethers	5.0	5.67	N/A	4.87	<10 for installation
Hexavalent chromium	0.002	0.0025 <sup>3</sup>	0.001 <sup>2</sup>	0.0003	N/A
HDI	0.02	0.052	N/A	N/A	N/A
Methanol	10.0	0.16	0.05	0.16	N/A
MIBK	10.0	3.40	3.79	N/A	N/A
Toluene	10.0	4.54	0.45	N/A	N/A
Xylene	10.0	6.32	2.36	N/A	N/A

Phenol	0.10	0.16	N/A	0.16	<0.10
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N/A = Not Applicable

<sup>1</sup>Screen Model Action Level (SMAL) listed for individual HAPs.

<sup>2</sup>Reported in EIQs as chromium compounds.

<sup>3</sup>Represents the metal portion of the compounds.

<sup>4</sup>The particle size distribution of the particulate emitted from the spray gun has not been determined.

Therefore, it is assumed that all of the PM<sub>10</sub> emitted is also PM<sub>2.5</sub>.

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all criteria pollutants are below de minimis levels. Phenol has been conditioned to below its' respective SMALs. Glycol ethers have been conditioned to below 10.0 tons per year for the installation.

## APPLICABLE REQUIREMENTS

Platinum Aerostructures 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *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

- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*,

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 this permit be granted with special conditions.

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Susan Heckenkamp  
Environmental Engineer

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Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 1, 2010, received March 23, 2010, designating Precision Aero Services as the owner and operator of the installation. This facility has undergone a name change in 2010 to Platinum Aerostructures.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southwest Regional Office Site Survey, dated March 30, 2010.
- Spreadsheets supplied by Platinum Aerostructures containing the material applied in each spray booth and ratio of based paint, thinner, and catalyst for each coating.



