


Permit #: 28.3306-01  
Effective Date: December 5, 2016  
Expiration Date: December 5, 2021

The seal of the State of South Dakota is a large, circular emblem with a serrated outer edge. It features a central landscape scene with a river, a bridge, and a building. The text "STATE OF SOUTH DAKOTA" is arched across the top, and "1889" is at the bottom. The motto "UNDER GOD THE PEOPLE RULE" is inscribed in a smaller arc above the landscape. Two stars are positioned on either side of the central scene.

**SOUTH DAKOTA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES  
TITLE V AIR QUALITY OPERATING PERMIT**

A handwritten signature in black ink, appearing to read "S. Pirner".

**Steven M. Pirner, P.E., Secretary  
Department of Environment and Natural Resources**

**Under the South Dakota Air Pollution  
Control Regulations**

Pursuant to Chapter 34A-1-21 of the South Dakota Codified Laws and the Air Pollution Control Regulations of the State of South Dakota and in reliance on statements made by the owner designated below, a permit to operate is hereby issued by the Secretary of the Department of Environment and Natural Resources. This permit authorizes such owner to operate the unit(s) at the location designated below and under the listed conditions:

A. Owner

1. Company Name and Mailing Address

Badlands Manufacturing, LLC  
612 West Blackhawk St.  
Sioux Falls, South Dakota 57104

2. Actual Source Location if Different from Above

612 West Blackhawk St.  
Sioux Falls, South Dakota 57104

3. Permit Contact

Ryan Joens, Engineer  
(605) 965-1600

4. Facility Contact

Ryan Joens, Engineer  
(605) 965-1600

5. Responsible Official

Marty J. Comes, CEO  
(605) 965-1600

B. Permit Revisions or Modifications

None

C. Type of Operation

Manufacture the tops and bottoms of fiberglass tanks

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## 1.0 Standard Conditions

### 1.1 Operation of source

In accordance with Administrative Rules of South Dakota (ARSD) 74:36:05:16.01(8), the owner or operator shall operate the units, controls, and processes as described in Table 1-1 in accordance with the statements, representations, and supporting data contained in the complete permit application received August 3, 2015 unless modified by the conditions of this permit. Except as otherwise provided herein, the control equipment shall be operated at all times in accordance with the manufacturer's specification and in a manner that achieves compliance with the conditions of this permit. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted.

*Table 1-1 – Description of Permitted Units, Operations, and Processes*

Unit	Description	Control Device
#1	Molding room north exhaust fan for the small spincast, mold fab, and small, medium, and large heads	Not Applicable
#2	Molding room south exhaust fan for the large spincast and winder	Not Applicable
#3	Finishing room exhaust louver – west wall for finishing (hand lay-up) operations	Not Applicable
#4	Finishing room exhaust louver – south wall, west unit for finishing (hand lay-up) operations	Not Applicable
#5	Finishing room exhaust louver – south wall, east unit for finishing (hand lay-up) operations	Not Applicable

### 1.2 Duty to comply

In accordance with ARSD 74:36:05:16.01(12), the owner or operator shall comply with the conditions of this permit. An owner or operator who knowingly makes a false statement in any record or report or who falsifies, tampers with, or renders inaccurate, any monitoring device or method is in violation of this permit. A violation of any condition in this permit is grounds for enforcement, reopening this permit, permit termination, or denial of a permit renewal application. The owner or operator, in an enforcement action, cannot use the defense that it would have been necessary to cease or reduce the permitted activity to maintain compliance. The owner or operator shall provide any information requested by the Secretary to determine compliance or whether cause exists for reopening or terminating this permit.

### 1.3 Property rights or exclusive privileges

In accordance with ARSD 74:36:05:16.01(12), the State's issuance of this permit, adoption of design criteria, and approval of plans and specifications does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property

owned by third parties. The State does not warrant the owner's or operator's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The owner or operator is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

#### **1.4 Penalty for violating a permit condition**

In accordance with South Dakota Codified Laws (SDCL) 34A-1-39 and 34A-1-47, a violation of a permit condition may subject the owner or operator to civil or criminal prosecution, a state penalty of not more than \$10,000 per day per violation, injunctive action, administrative permit action, and other remedies as provided by law.

#### **1.5 Inspection and entry**

In accordance with SDCL 34A-1-41, the owner or operator shall allow the Secretary, upon presentation of credentials, to:

1. Enter the premises where a regulated activity is located or where pertinent records are stored;
2. Have access to and copy any records required under this permit;
3. Inspect operations regulated under this permit; and/or
4. Sample or monitor any substances or parameters for the purpose of assuring compliance.

#### **1.6 Severability**

In accordance with ARSD 74:36:05:16.01(11), any portion of this permit that is void or challenged shall not affect the validity of the remaining permit requirements.

#### **1.7 Permit termination, modification, or revocation**

In accordance with ARSD 74:36:05:46, the Secretary may recommend the Board of Minerals and Environment terminate, modify, or revoke this permit for violations of SDCL 34A-1 or the federal Clean Air Act or for nonpayment of any outstanding fee or enforcement penalty.

#### **1.8 Credible evidence**

In accordance with ARSD 74:36:13:07, credible evidence may be used for the purpose of establishing whether the owner or operator has violated or is in violation of this permit. Credible evidence may consist of the following:

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred:
  - a. A monitoring method approved pursuant to 40 CFR § 70.6(a)(3) and incorporated in this permit; or
  - b. Compliance methods specified in an applicable plan;
2. The following testing, monitoring, or information gathering methods are presumptively credible testing, monitoring, or information-gathering methods:

- a. Any monitoring or testing methods approved in this permit, including those in 40 CFR Parts 51, 60, 61, and 75; or
- b. Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in paragraph (1) or (2)(a).

## **2.0 Permit Fees**

### **2.1 Annual air fee required**

In accordance with ARSD 74:36:05:06.01, the owner or operator shall submit an annual administrative fee and an annual fee. The fee is based on actual emissions in accordance with ARSD 74:37.

### **2.2 Annual operational report**

In accordance with ARSD 74:37:01:06, the Secretary will supply the owner or operator with an annual operational report in January of each year. The owner or operator shall complete and submit the operational report to the Secretary by March 1 of each year. The responsible official shall sign the operational report in the presence of a notary public.

### **2.3 Annual air fee**

In accordance with ARSD 74:37:01:08, the Secretary will notify the owner or operator of the required annual air emission fee and administrative fee by June 1 of each year. The fees shall accrue on July 1 and are payable to the Department of Revenue by July 31 of each year.

## **3.0 Permit Amendments and Modifications**

### **3.1 Permit flexibility**

In accordance with ARSD 74:36:05:30, the owner or operator shall have the flexibility to make changes to the source during the term of this permit. The owner or operator shall provide the Secretary written notice at least seven days in advance of the proposed change (NOTE: The Secretary will forward a copy of the written notice to EPA). The written notice shall include a brief description of the change, the date on which the change is to occur, any change in emissions, the proposed changes to the permit, and whether the requested revisions are for an administrative permit amendment, minor permit amendment, or permit modification.

The Secretary will notify the owner or operator whether the change is an administrative permit amendment, a minor permit amendment, or a permit modification. A proposed change that is considered an administrative permit amendment or a minor permit amendment can be completed immediately after the Secretary receives the written notification. The owner or operator must comply with both the applicable requirements governing the change and the proposed permit terms and conditions until the Secretary takes final action on the proposed change.

A proposed change that is considered a modification cannot be implemented until the Secretary takes final action on the proposed change or the owner or operator was issued an air quality construction permit. Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except that the required review shall cover only the proposed changes.

### **3.2 Administrative permit amendment**

In accordance with ARSD 74:36:05:33, the Secretary has 60 days from receipt of a written notice to verify the proposed change is an administrative permit amendment. As provided in ARSD 74:36:01:03, the Secretary considers a proposed change an administrative permit amendment if the proposed change accomplishes one of the following:

1. Corrects typographical errors;
2. Changes the name, address, or phone number of any person identified in this permit or provides a similar minor administrative change;
3. Requires more frequent monitoring or reporting;
4. The ownership or operational control changes and the Secretary determines no other change in this permit is necessary. However, the new owner must submit a certification of applicant form and a written statement specifying the date for transfer of operating permit responsibility, coverage, and liability; or
5. Any other changes the Secretary and the administrator of EPA determines to be similar to those requirements in this condition.

### **3.3 Minor permit amendment**

In accordance with ARSD 74:36:05:38, the Secretary has 90 days from receipt of a written notice or 15 days after the end of EPA's 45-day review period, whichever is later, to take final action on a minor permit amendment. Final action consists of issuing or denying a minor permit amendment or determining the proposed change is a permit modification. As provided in ARSD 74:36:05:35, the Secretary considers a proposed change to be a minor permit amendment if the proposed change:

1. Does not violate any applicable requirements;
2. Does not involve significant changes to existing monitoring, reporting, or recordkeeping requirements;
3. Does not require or change a case-by-case determination of an emission limit or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; or
4. Does not seek to establish or change a permit term or condition for which the source has assumed to avoid an applicable requirement, a federally enforceable emission cap, or an alternative emission limit. An alternative emission limit is approved pursuant to regulations promulgated under section 112(i)(5) of the federal Clean Air Act.



### **3.4 Permit modification**

In accordance with ARSD 74:36:05:39, an owner or operator may apply for a permit modification. A permit modification is defined in ARSD 74:36:01:10 as a physical change in or change in the operation of a source that results in at least one of the following:

1. An increase in the amount of an air pollutant emitted by the source or results in the emission of an air pollutant not previously emitted;
2. A significant change to existing monitoring, reporting, or recordkeeping requirements in the permit;
3. The change requires or changes a case-by-case determination of an emission limit or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; or
4. The change seeks to establish or change a permit term or condition for which there is a corresponding underlying applicable requirement that the source has assumed to avoid an applicable requirement, a federally enforceable emissions cap assumed to avoid classification as a modification under a provision of the Title I of the Clean Air Act, or an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Clean Air Act.

Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except the required review shall cover only the proposed changes.

### **3.5 Permit revision**

In accordance with ARSD 74:36:05:40, the Secretary may reopen and revise this permit to meet requirements of SDCL 34A-1 or the federal Clean Air Act. In accordance with ARSD 74:36:05:41, the Secretary shall notify the owner or operator at least 30 days before reopening this permit. The 30-day period may be less in the case of an emergency.

### **3.6 Testing new fuels or raw materials**

In accordance with ARSD 74:36:11:04, an owner or operator may request permission to test a new fuel or raw material to determine if it is compatible with existing equipment before requesting a permit amendment or modification. A complete test proposal shall consist of the following:

1. A written proposal describing the new fuel or raw material, operating parameters, and parameters that will be monitored and any testing associated with air pollutant emissions during the test;
2. An estimate of the type and amount of regulated air pollutant emissions resulting from the proposed change; and
3. The proposed schedule for conducting the test. In most cases the owner or operator will be allowed to test for a maximum of one week. A request for a test period longer than one week will need additional justification. A test period shall not exceed 180 days.

The Secretary shall approve, conditionally approve, or deny in writing the test proposal within 45 days after receiving a complete proposal. Approval conditions may include changing the test schedule or pollutant sampling and analysis methods. Pollutant sampling and analysis methods may include, but are not limited to performance testing, visible emission evaluation, fuel analysis, dispersion modeling, and monitoring of raw material or fuel rates.

If the Secretary determines the proposed change will result in an increase in the emission of a regulated air pollutant or result in the emission of an additional regulated air pollutant, the Secretary shall give public notice of the proposed test for 30 days. The Secretary shall consider all comments received during the 30-day public comment period before making a final decision on the test.

The Secretary will not approve a test if the test would cause or contribute to a violation of a national ambient air quality standard.

## **4.0 Permit Renewal**

### **4.1 Permit effective**

In accordance with ARSD 74:36:05:07, this permit shall expire five years from date of issuance unless reopened or terminated for cause. The current permit shall not expire and shall remain in effect until the Secretary takes final action on the renewal application.

### **4.2 Permit renewal**

In accordance with ARSD 74:36:05:08, the owner or operator shall submit an application for a permit renewal at least 180 days before the date of permit expiration if the owner or operator wishes to continue to operate an activity regulated by this permit. The current permit shall not expire and shall remain in effect until the Secretary takes final action on the timely permit renewal application.

### **4.3 Permit expiration**

In accordance with ARSD 74:36:05:28, permit expiration terminates the owner's or operator's right to operate any unit covered by this permit.

## **5.0 Recordkeeping and Reporting**

### **5.1 Recordkeeping and reporting**

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or application unless otherwise specified in this permit. The records shall be maintained on site for the first two years and may be maintained off site for the last three years. All records must be made available to the Secretary for inspection. All notifications and reports shall be submitted to the following address:

South Dakota Department of Environment and Natural Resources  
PMB 2020, Air Quality Program  
523 E. Capitol, Joe Foss Building  
Pierre, SD 57501-3182

## **5.2 Signatory requirements**

In accordance with ARSD 74:36:05:12 and 74:36:05:16.01, all applications, reports, or other information submitted to the Secretary shall be signed and certified by a responsible official or a duly authorized representative. A responsible official for a corporation is a responsible corporate officer and for a partnership or sole proprietorship is a general partner or the proprietor, respectively. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Secretary; and
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

The duly authorized representative must be designated prior to or together with any reports or information to be signed by a duly authorized representative. The responsible official shall notify the Secretary if an authorization is no longer accurate.

## **5.3 Certification statement**

In accordance with ARSD 74:36:05:16.01(14)(a), all documents required by this permit, including application forms, reports, and compliance certification, must be certified by a responsible official or a duly authorized representative. The certification shall include the following statement:

“I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document and all attachments are true, accurate, and complete.”

## **5.4 Monitoring log**

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain a monitoring log. The monitoring log shall contain the following information.

1. The following information shall be recorded within two days of each emergency exceedance:
  - a. The date of the emergency exceedance and the date the emergency exceedance was reported to the Secretary;
  - b. The cause(s) of the emergency;
  - c. The reasonable steps taken to minimize the emissions during the emergency; and
  - d. A statement the permitted equipment was at the time being properly operated.

### **5.5 Annual records**

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate and record the following amounts from January 1 to December 31 of each year:

1. The amount of product used at the facility; and
2. The amount of each hazardous air pollutant and volatile organic compound emissions from the facility.

The amount of hazardous air pollutants and volatile organic compound emissions shall be based on production records, consumption records, purchase records, material safety data sheets, etc.

### **5.6 Annual compliance certification**

In accordance with ARSD 74:36:05:16.01(14), the owner or operator shall submit an annual compliance certification letter to the Secretary by March 1 of each year this permit is in effect (NOTE: The Secretary will forward a copy of the certification letter to EPA). The certification shall contain the following information:

1. Methods used to determine compliance, including: monitoring, recordkeeping, performance testing and reporting requirements;
2. The source is in compliance and will continue to demonstrate compliance with all applicable requirements;
3. In the event the source is in noncompliance, a compliance plan that indicates how the source has or will be brought into compliance; and
4. Certification statement required in permit condition 5.3.

### **5.7 Reporting permit violations**

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall report all permit violations. A permit violation should be reported as soon as possible, but no later than the first business day following the day the violation was discovered. The permit violation may be reported by telephone to the South Dakota Department of Environment and Natural Resources at (605) 773-3151 or by FAX at (605) 773-4068.

A written report shall be submitted within five days of discovering the permit violation. Upon prior approval from the Secretary, the submittal deadline for the written report may be extended up to 30 days. The written report shall contain:

1. A description of the permit violation and its cause(s);
2. The duration of the permit violation, including exact dates and times; and
3. The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the permit violation.

## **6.0 Control of Regulated Air Pollutants**

### **6.1 Visibility limit**

In accordance with ARSD 74:36:12:01, the owner or operator may not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from any permitted unit, operation, or process listed in Table 1-1, unless otherwise specified in this permit. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement.

### **6.2 Visibility exceedances**

In accordance with ARSD 74:36:12:02, an exceedance of the opacity limit in permit condition 6.1 is not considered a violation during brief periods of soot blowing, start-up, shutdown, or malfunctions. Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. A failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator is not a malfunction and is considered a violation.

### **6.3 Air emission exceedances – emergency conditions**

In accordance with ARSD 74:36:05:16.01(18), the Secretary will allow for an unavoidable emission exceedance of a technology-based emission limit if the exceedance is caused by an emergency condition and immediate action is taken by the owner or operator to restore the operations back to normal. An emergency condition is a situation arising from a sudden and reasonably unforeseeable event beyond the control of the owner or operator, including acts of God. An emergency shall not include an emission exceedance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. The owner or operator shall notify the Secretary within two working days of the incident and take all steps possible to eliminate the excess emissions. The notification must provide a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. If the notification is submitted orally, a written report summarizing the information required by the notification shall be submitted and postmarked within 30 days of the oral notification

### **6.4 Circumvention not allowed**

In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.4(b), no owner or operator shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere.

### **6.5 Minimizing emissions**

In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.6(e)(1)(i), the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, operate and maintain any permitted unit, including associated air pollution control equipment and monitoring

equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires the owner or operator to reduce emissions from the permitted unit to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including a startup, shutdown, and malfunction plan, if required), review of operation and maintenance records, and inspection of the operation.

## **7.0 Performance Tests**

### **7.1 Performance test may be required**

In accordance with ARSD 74:36:11:02, the Secretary may request a performance test during the term of this permit. A performance test shall be conducted while operating the unit at or greater than 90 percent of its maximum design capacity, unless otherwise specified by the Secretary. A performance test conducted while operating less than 90 percent of its maximum design capacity will result in the operation being limited to the percent achieved during the performance test. The Secretary has the discretion to extend the deadline for completion of performance test required by the Secretary if circumstances reasonably warrant but will not extend the deadline past a federally required performance test deadline.

### **7.2 Test methods and procedures**

In accordance with ARSD 74:36:11:01, the owner or operator shall conduct the performance test in accordance with 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M. The Secretary may approve an alternative method if a performance test specified in 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M is not federally applicable or federally required.

### **7.3 Representative performance test**

In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(c), performance tests shall be conducted under such conditions as the Secretary shall specify to the owner or operator based on the representative performance of the unit being tested. The owner or operator shall make available to the Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in this permit.

**7.4 Submittal of test plan**

In accordance with ARSD 74:36:11:01, the owner or operator shall submit the proposed testing procedures to the Secretary at least 30 days prior to any performance test. The Secretary will notify the owner or operator if the proposed test procedures are approved or denied. If the proposed test procedures are denied, the Secretary will provide written notification outlining what needs to be completed for approval.

**7.5 Notification of test**

In accordance with ARSD 74:36:11:03, the owner or operator shall notify the Secretary at least 10 days prior to the start of a performance test to arrange for an agreeable test date when the Secretary may observe the test. The Secretary may extend the deadline for the performance test in order to accommodate schedules in arranging an agreeable test date.

**7.6 Performance test report**

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a performance test report to the Secretary within 60 days after completing the performance test or by a date designated by the Secretary. The performance test report shall contain the following information:

1. A brief description of the process and the air pollution control system being tested;
2. Sampling location description(s);
3. A description of sampling and analytical procedures and any modifications to standard procedures;
4. Test results represented in the same terminology as the permit limits;
5. Quality assurance procedures and results;
6. Records of operating conditions during the test necessary for demonstrating compliance with the permit limits, preparation of standards, and calibration procedures;
7. Raw data sheets for field sampling and field and laboratory analyses;
8. Documentation of calculations;
9. All data recorded and used to establish parameters for compliance monitoring; and
10. Any other information required by the test method.

**8.0 MACT Subpart WWWW Requirements**

**8.1 Organic HAP emission limit**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §§63.5805(b) and 63.5835, the owner or operator shall at all times meet the organic hazardous air pollutant emission limits in Table 8-1.

*Table 8-1 – Organic HAP Emission Limits*

<b>Open Molding</b>	<b>And you use...</b>	<b>Emission Limit</b>
<b>If operation type is...</b>		<b>(pounds/ton)<sup>1</sup></b>
Corrosion resistant and/or	Mechanical resin application	113

high strength	Filament application	171
	Manual resin application	123
Non-corrosion resistant and/or high strength	Mechanical resin application	88
	Filament application	188
	Manual resin application	87
Tooling	Mechanical resin application	254
	Manual resin application	157
Low flame spread/low smoke products	Mechanical resin application	497
	Filament application	270
	Manual resin application	238
Shrinkage controlled resins <sup>2</sup>	Mechanical resin application	354
	Filament application	215
	Manual resin application	180
Gel coat <sup>3</sup>	Tooling del coating	440
	White/off white pigmented gel coating	267
	All other pigmented gel coating	377
	Corrosion resistant and/or high strength or high performance gel coating	605
	Fire retardant gel coating	854
	Clear production gel coating	522

<sup>1</sup> – Organic hazardous air pollutant limits for open molding is expressed as pounds per ton. The owner or operator must be at or below these values on a 12-month rolling average;

<sup>2</sup> – This emission limit applies regardless of whether the shrinkage controlled resin is used as a production resin or a tooling resin; and

<sup>3</sup> – If the owner or operator applies gel coat with manual application, for compliance purposes treat the gel coat as if it were applied using atomized spray guns to determine both emission limits and emission factors. If the owner or operator uses multiple application methods and any portion of the specific gel coat is applied using nonatomized spray, the owner or operator may use the nonatomized spray gel coat equation to calculate an emission factor for the manually applied portion of that gel coat. Otherwise, the owner or operator shall use the atomized spray gel coat application equation to calculate emission factors.

## **8.2 Demonstrating compliance with weighted average emission limit**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §§63.5810(c) and 63.5900(a)(2), the owner or operator shall demonstrate compliance on a monthly basis with the organic hazardous air pollutant limit in permit condition 8.1 using a weighted average of the applicable organic hazardous air pollutant emission limits in Table 8-1. The compliance demonstration must be calculated within 30 days after the end of each month. If the 12-month rolling weighted average organic hazardous air pollutant emission factor calculated in permit condition 8.4 is less than or equal to the corresponding 12-month rolling weighted average organic emission limit calculated in permit condition 8.3, the owner or operator is in compliance with permit condition 8.1.



If the owner or operator elects to use a different method, the owner or operator shall apply for and obtain approval from the Secretary prior to using the different method to demonstrate compliance.

### **8.3 Calculating monthly weighted average emission limit**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5810(c)(1), each month, the owner or operator shall calculate the weighted average organic hazardous air pollutant emission limit for all open molding operations for the last 12-month period to determine the organic hazardous air pollutant emission limit for that month. To do this, the owner or operator shall multiply the individual organic hazardous air pollutant emission limit in Table 8-1 for each open molding operation type by the amount of neat resin plus or neat gel coat plus used in the last 12 months for each open molding operation type, sum these results, and divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding over the last 12 months as shown in Equation 8-1.

#### ***Equation 8-1 – Organic HAP Weighted Average Emission Limit***

$$\text{Weighted Average Emission Limit} = \frac{\sum_{i=1}^n (EL_i \times \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i}$$

Where:

- $EL_i$  = Organic hazardous air pollutant emission limits for operation “i”, in pounds per ton from Table 4W-1;
- $\text{Material}_i$  = Neat resin plus or neat gel coat plus used during the last 12-month period for operation type “i”, in tons; and
- n = Number of operations.

### **8.4 Calculating monthly weighted average emission factor**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5810(c)(2), each month, the owner or operator shall calculate the weighted average organic hazardous air pollutant emission factor for open molding operations. To do this, the owner or operator shall calculate the actual open molding operation organic hazardous air pollutant emission factors based on Equation 8-2. The owner or operator shall then multiply the results Equation 8-2 and the amount of neat resin plus and neat gel coat plus used in each open molding operation type, sum the results, and divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding operation as shown in Equation 8-3.

#### ***Equation 8-2 – Average Organic HAP Emission Factor***

$$\text{Average Emission Factor} = \frac{\sum_{i=1}^n (\text{Actual Process Stream } EF_i \times \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i}$$

Where:

- Actual process stream  $EF_i$  = Actual organic hazardous air pollutant emission factor for process stream “i”, in pounds per ton;

- Material<sub>i</sub> = Neat resin plus or neat gel coat plus used during the last 12-month period for process stream “i”, in tons; and
- n = Number of process streams where the owner or operator calculated an organic hazardous air pollutant emissions factor.

**Equation 8-3 – Weighted Average Organic HAP Emission Factor**

$$\text{Weighted Average Emission Factor} = \frac{\sum_{i=1}^n (\text{Actual Operation } EF_i \times \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i}$$

Where:

- Actual operation EF<sub>i</sub> = Actual organic hazardous air pollutant emission factor for operation type “i”, in pounds per ton;
- Material<sub>i</sub> = Neat resin plus or neat gel coat plus used during the last 12-month period for operation type “i”, in tons; and
- n = Number of operations.

**8.5 Calculating emission factors for open molding operation types**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5796, the owner or operator shall use the equations in Table 8-2 through 8-7 to calculate the organic hazardous air pollutant emission factors for open molding operation types. The organic hazardous air pollutant emissions factors derived from the equations in this permit condition shall be used in calculating the monthly weighted average emission factors in permit condition 8.4.

**Table 8-2 – Organic HAP Emission Factors for Manual Resin Application**

Resin Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 33% organic HAP	EF = 0.126 x %HAP x 2,000
	33% organic HAP or greater	EF = ((0.286 x %HAP) – 0.0529) x 2,000
Vapor suppressed	Less than 33% organic HAP	EF = 0.126 x %HAP x 2,000 x (1 – (0.5 x VSE factor))
	33% organic HAP or greater	EF = ((0.286 x %HAP) – 0.0529) x 2,000 x (1 – (0.5 x VSE Factor))

**Table 8-3 – Organic HAP Emission Factors for Atomized Mechanical Resin Application**

Resin Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 33% organic HAP	EF = 0.169 x %HAP x 2,000
	33% organic HAP or greater	EF = ((0.714 x %HAP) – 0.18) x 2,000
Vapor suppressed	Less than 33% organic HAP	EF = 0.169 x %HAP x 2,000 x (1 – (0.45 x VSE factor))

Resin Type	Materials with	HAP Emission Factor Equation (pounds per ton)
	33% organic HAP or greater	$EF = ((0.714 \times \%HAP) - 0.18) \times 2,000 \times (1 - (0.45 \times VSE \text{ Factor}))$

**Table 8-4 – Organic HAP Emission Factors for Nonatomized Mechanical Resin Application**

Resin Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 33% organic HAP	$EF = 0.107 \times \%HAP \times 2,000$
	33% organic HAP or greater	$EF = ((0.157 \times \%HAP) - 0.0165) \times 2,000$
Vapor suppressed	Less than 33% organic HAP	$EF = 0.107 \times \%HAP \times 2,000 \times (1 - (0.45 \times VSE \text{ factor}))$
	33% organic HAP or greater	$EF = ((0.157 \times \%HAP) - 0.0165) \times 2,000 \times (1 - (0.45 \times VSE \text{ Factor}))$

**Table 8-5 – Organic HAP Emission Factors for Filament Application <sup>1</sup>**

Resin Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 33% organic HAP	$EF = 0.184 \times \%HAP \times 2,000$
	33% organic HAP or greater	$EF = ((0.2746 \times \%HAP) - 0.0298) \times 2,000$
Vapor suppressed	Less than 33% organic HAP	$EF = 0.12 \times \%HAP \times 2,000$
	33% organic HAP or greater	$EF = ((0.2746 \times \%HAP) - 0.0298) \times 2,000 \times 0.65$

<sup>1</sup> – This table only applies to filament applications using an open resin bath. If resin is applied manually or with a spray gun, the appropriate manual or mechanical application organic hazardous air pollutant emission factor equation shall be used.

**Table 8-6 – Organic HAP Emission Factors for Atomized Spray Gel Coat Application**

Gel Coat Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 33% organic HAP	$EF = 0.445 \times \%HAP \times 2,000$
	33% organic HAP or greater	$EF = ((1.03646 \times \%HAP) - 0.195) \times 2,000$

**Table 8-7 – Organic HAP Emission Factors for Nonatomized Spray Gel Coat Application**

Gel Coat Type	Materials with	HAP Emission Factor Equation (pounds per ton)
Non-vapor suppressed	Less than 19% organic HAP	EF = 0.185 x %HAP x 2,000
	19% organic HAP or greater	EF = ((0.4506 x %HAP) – 0.0505) x 2,000

If the owner or operator elects to use site-specific organic HAP emissions factors to demonstrate compliance, the owner or operator shall apply for and obtain approval from the Secretary before the site-specific emission factors can be used to demonstrate compliance.

**8.6 Calculating organic HAP content of resins and gel coats**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5797, the owner or operator may rely on information provided by the material manufacturer, such as manufacturer’s formulation data and material safety data sheets (MSDS) for determining the organic hazardous air pollutant content of resins and gel coats using the following procedures:

1. Include in the organic hazardous air pollutant total each organic hazardous air pollutant that is present at 0.1 percent by mass or more for Occupational Safety and Health Administration-defined carcinogens, as specified in 29 CFR §1910.1200(d)(4) and at 1.0 percent by mass or more for other organic hazardous air pollutant compounds.
2. If the material supplier or manufacturer supplies the organic hazardous air pollutant content as a range, the owner or operator must use the upper limit of the range for determining compliance. If a separate measurement of the total organic hazardous air pollutant content exceeds the upper limit of the range of the total organic hazardous air pollutant provided by the material supplier or manufacturer, the owner or operator must use the measured organic hazardous air pollutant content to determine compliance.
3. If the material supplier or manufacturer supplies the organic hazardous air pollutant content as a single value, the owner or operator may use that value to determine compliance. If a separate measurement of the total organic hazardous air pollutant content is made and is less than 2 percentage points higher than the value for total organic hazardous air pollutant content provided by the material supplier or manufacturer, then the owner or operator may use the provided value to demonstrate compliance. If the measured total organic hazardous air pollutant content exceeds the provided value by 2 percentage points or more, the owner or operator shall use measured organic hazardous air pollutant content to determine compliance.

**8.7 Resin and gel coat records**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5895(c), the owner or operator shall collect and maintain records of resin and gel coat use, organic hazardous air pollutant content, and operations where the resin is used. Resin use records may be based on purchase records if you can reasonably estimate how the resin is applied. The organic hazardous air pollutant content records may be based on the MSDS or on resin specifications supplied by the resin supplier.

### **8.8 Semiannual compliance report**

In accordance with ARSD 74:36:08:38, as referenced to 40 §63.5910, the owner or operator shall submit a semiannual compliance report to the Secretary. The semiannual report shall include the following information:

1. Name of the facility, permit number, reference to this permit condition, identify the submittal as a semiannual report, and calendar dates covered in the reporting period;
2. If there are no deviations from the organic hazardous air pollutant emission limit in permit condition 8.1, a statement there were no deviations from the organic hazardous air pollutant emission limit during the reporting period;
3. For each deviation from the organic hazardous air pollutant emission limit, the total operating time of Units #1 and #2, and the duration, cause of the deviation and corrective action taken; and
4. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

Semiannual reports shall be postmarked no later than the 30<sup>th</sup> day following the end of reporting period (January 30<sup>th</sup> and July 30<sup>th</sup>).

### **8.9 Record retention**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §§63.5915 and 63.5920, the owner or operator shall maintain the following records for five years from the date of sample, measurement, report, or application. The records shall be maintained on site for the first two years and may be maintained off site for the last three years:

1. A copy of each notification and report submitted to comply with chapter 8.0, including all supporting documentation;
2. All data, assumptions, and calculations used to determine organic hazardous air pollutant emission factors; and
3. All data and calculations used to determine compliance with the weighted average emission limit in permit condition 8.2.

### **8.10 Work Practice Standards**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5805, a new or existing cleaning operation cannot use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin.

A new or existing materials HAP-containing materials storage operation shall keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.

## **8.11 Definitions**

In accordance with ARSD 74:36:08:38, as referenced to 40 CFR §63.5935, the following terms used in Chapter 8.0 have the following meaning:

1. “Neat gel coat plus” means neat gel coat plus any organic hazardous air pollutant containing materials that are added to the gel coat by the supplier or the owner or operator, excluding catalysts and promoters. Neat gel coat plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.
2. “Neat resin plus” means neat resin plus any organic hazardous air pollutant containing materials that are added to the resin by the supplier or the owner or operator. Neat resin plus does not include any added filler, reinforcements, catalysts, or promoters. Neat resin plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.
3. “Process stream” means each individual combination of resin or gel coat, application technique, and control technique. Process streams within operation types are considered different from each other if any of the following four characteristics vary:
  - a. The neat resin plus or neat gel coat plus organic hazardous air pollutant content;
  - b. The gel coat type;
  - c. The application technique; or
  - d. The control technique.
4. “%HAP” in Equations 8-2 to 8-7 means total weight percent of organic hazardous air pollutant (i.e., styrene, methyl methacrylate, and any other organic hazardous air pollutant) in the resin or gel coat prior to the addition of fillers, catalyst, and promoters. Input the percent hazardous air pollutant as a decimal (i.e., 33 %HAP should be input as 0.33).
5. “VSE factor” in Equations 8-2 to 8-7 means the percent reduction in organic hazardous air pollutant emissions expressed as a decimal measure by the VSE test method of Appendix A of 40 CFR Part 63.
6. “Vapor suppressed resin” in Equations 8-2 to 8-7 means a resin containing a vapor suppressant added for the purpose of reducing styrene emissions during curing.