

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Permitting and Compliance Division
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Fiberglass Structures, Inc.
Section 16, Township 2 South, Range 24 East, in Yellowstone County, Montana
119 South Washington Ave.
Laurel, MT 59044

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Method 9, as required by the Department
Ambient Monitoring Required		X	
Continuous Opacity Monitoring System (COMS) Required		X	
Continuous Emission Monitoring System (CEMS) Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As applicable
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
Administrative Rule of Montana (ARM) Subchapter 7 – Montana Air Quality Permit (MAQP)	X		MAQP #3343-02
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart WWWW
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)		X	
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emissions units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Fiberglass Structures, Inc. (FSI) on June 3, 2004, and additional information received on May 26, 2006, July 11, 2006, July 18, 2006 and September 28, 2006; the renewal application received on May 16, 2011; a permit modification application received on October 21, 2011; and an administrative amendment request received on August 14, 2013.

B. Facility Location

The FSI is located in Section 16, Township 2 South, Range 24 East, in Yellowstone County. The physical address is 119 South Washington Avenue in Laurel, Montana.

C. Facility Background Information

Montana Air Quality Permit (MAQP) Background

Montana Air Quality Permit (MAQP) #3343-00 was issued to FSI on August 10, 2004. At that time, FSI consisted of one multi-color system-one gelcoat unit, a venus chopper hoop winder, and four venus chopper guns. On or about February 15, 2006, FSI moved some of the permitted equipment into a new building (herein referred to as the Tank Division) without first obtaining an air quality permit. The Tank Division property was not located contiguous to the Main Building and therefore was required to obtain a separate permit for the new facility. The Department of Environmental Quality (Department) issued a violation (violation #VLRG0609) to FSI for construction without an air quality permit on June 21, 2006.

FSI, after realizing that they had violated the Administrative Rules of Montana (ARM) 17.8.743(1) submitted two Air Quality Permit applications on April 17, 2006, to the Department: one to amend MAQP #3343-00 to reflect the removal of equipment (venus chopper hoop winder), and one to create the Tank Division. The administrative amendment, **MAQP #3343-01**, was finalized on November 4, 2006.

On October 21, 2011, the Department received an application to modify MAQP 3343-01 in order to add one (1) gel coat spray booth and one (1) chop-hoop winder to existing equipment. **MAQP #3343-02** was issued final on November 17, 2011, and replaced permit MAQP #3343-01.

Title V Operating Permit Background

Operating Permit #OP3343-00 was issued to FSI on January 22, 2005.

On April 17, 2006, FSI submitted a request to amend Operating Permit #OP3343-00, and to remove the Venus Automatic Chop Hoop Winder from the FSI Main Building, since this piece of equipment was recently moved to the FSI Tank Division (MAQP #3821-00 and Operating Permit #OP3821-00). In addition, FSI requested correction of the potential emissions for the remaining equipment to reflect more accurate emission estimates. **Operating Permit #OP3343-01** replaces Operating Permit #OP3343-00.

The FSI Main Building remains a major Title V source due to the potential to emit over 10 tons per year (tpy) of a Hazardous Air Pollutant (HAP). This facility is subject to the Maximum Achievable Control Technology (MACT) standard, 40 CFR 63 Subpart WWWW. Therefore, the Department modified the permit to reflect operating conditions, and also updated the regulatory references to the MACT standard, 40 CFR 63 Subpart WWWW.

On May 16, 2011, the Department received a renewal application from FSI. No changes had occurred to fiberglass production activities at the facility. **Operating Permit #OP3343-02** was issued final on November 17, 2011 and replaced Operating Permit #OP3343-01

On October 21, 2011, the Department received an application to modify FSI's operating permit to add one (1) gel coat spray booth and one (1) chop-hoop winder to the existing equipment. **Operating Permit #OP3343-03** replaced Operating Permit #OP3343-02.

D. Current Permit Action

On August 14, 2013, the Department received an administrative amendment request from FSI to correct a typographical error. Operating Permit #3343-03 erroneously provided an expiration date of November 17, 2012, whereas the correct expiration date of FSI's Title V Operating Permit should be November 17, 2016. The current permit action updates the operating permit in order to provide the correct expiration date. **Operating Permit #OP3343-04** replaces Operating Permit #OP3343-03.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?

YES	NO	
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

The Department conducted a full compliance evaluation of the facility covering the period from July 18, 2007, through July 15, 2009. The facility appeared to be in compliance with all applicable conditions and limitations.

A Full Compliance Evaluation was completed for the facility covering the period from July 16, 2009, through June 15, 2011. It was found that the facility had not submitted a renewal Title V application on time. The Department received a Title V Renewal application on May 16, 2011. With exception of the late renewal application, FSI appeared to be in compliance with the terms and conditions of FSI's operating Permit and the references rules and regulations.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

FSI manufactures fiberglass reinforced plastic (FRP) products for a variety of purposes. All of the products are produced as corrosion-resistant or high-strength, open molding manufacture, via a combination of mechanical or manual methods. Volatile Organic Compound (VOC) emissions, primarily styrene, result from the product manufacturing process. Styrene is a listed HAP.

There are six primary steps completed in the FRP process, which include: plug fabrication; mold construction; wax or prep mold; gel coat application; laminate; and part removal/finish trim. The first step is fabrication of a plug, typically from wood. After generating the rough shape, the plug is coated with primer. A mold release compound (wax) is applied by hand. To make the mold, laminate (polyester resin, catalyst, and glass fibers) is then applied to the plug. The plug is removed, and the mold is then prepared for production by waxing the surface with the mold release wax.

To produce the tanks or other fiberglass products, laminate is applied to the mold. FSI conducts mostly mechanical applications, although manual applications are occasionally used. Mechanical methods employ high volume/low pressure (HVLP) non-atomizing spray units. Both spray a shaped stream of resin and catalyst, mixing externally with glass fibers fed through a chopper wheel. Depending upon the resin type and the product, the laminate is allowed to cure before removal from the mold.

The gel coat unit is an external mix gun that mixes polyester gel coat and catalyst outside the gun using a HVLP spray system to minimize material atomization. The primary chemicals used in polyester gel coats are styrene monomer, silicon dioxide, methyl methacrylate, and unsaturated polyester resin. Depending upon the resin type and the product, the laminate is allowed to cure before removal from the mold. Acetone, which is not a VOC, is used for cleaning the application equipment.

B. Emission Units and Pollution Control Device Identification

The emission units regulated by this permit are as follows (ARM 17.8.1211):

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	Building Exhaust (Gel coat unit and Chopper guns)	None

C. Categorically Insignificant Sources/Activities

The Administrative Rules of Montana (ARM) 17.8.1201(22)(a) defines an insignificant emissions unit as one that emits less than 5 tons per year of any regulated pollutant, has the potential to emit less than 500 pounds per year of lead or any hazardous air pollutant, and is not regulated by an applicable requirement other than a generally applicable requirement.

FSI did not provide a list of insignificant sources or activities. Therefore, this permit identifies no insignificant activities. Because there are no requirements to update such a list, the status of such emission units or activities may change.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The manufacturing of FRP at FSI utilizes thermosetting resins that contain styrene. VOC emissions, primarily styrene, result from the manufacturing process. Styrene is a listed HAP. All materials produced at FSI were characterized as “corrosion-resistant and/or high strength” due to properties for each product. At the present time, all resins used are considered “non-suppressed”.

The VOC emissions for this facility are limited to 84.92 tons during any rolling 12-month time period (ARM 17.8.752). In addition, this facility shall not exceed the applicable organic HAP emission limit listed in Table 3 of 40 CFR 63, Subpart WWWW on a 12-month rolling basis. This facility was characterized as open-molding, corrosion-resistant, and/or high-strength, and the following limits apply: 113 pounds HAP/ton of resin (lb/ton) for mechanical resin application, and 123 lb/ton for manual resin application, and 605 lb/ton for gelcoat application.

FSI shall comply with all applicable standards and limitations contained in 40 CFR 63, Subpart WWWW, including work practice standards as specified in Table 4.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emissions units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for a insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Billings Gazette* newspaper on March 9, 2012. The Department provided a 30-day public comment period on the draft operating permit from March 12, 2012, to April 11, 2012. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by April 11, 2011, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to FSI so they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
	No Public Comments Received	

G. Draft Permit Comments

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response
	No Comments Received	

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

FSI did not request a shield from any of the air quality ARMs or federal regulations (pursuant to ARM 17.8.1214). Therefore, no further analysis of non-applicable requirements is necessary.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards (Part 63)

By definition, the owner or operator of a composite fabrication plant that is a major source of HAPs is subject to the WWWW MACT. Major sources for HAPs are defined as those that emit more than 10 tpy of any single HAP or 25 tpy of any combination of HAPs. EPA has promulgated this MACT and the rule became effective on April 23, 2003. The process utilized by FSI in the manufacture of FRP products is categorized as *Reinforced plastic composites production*. FSI manufactures FRP products and its activities are categorized as *Reinforced plastic composites production*. By definition, *Reinforced plastic composites production* refers to manufacturing products and molding compounds that use thermosetting resins or gel coats containing styrene. Based on company information and calculations using EPA emission factors, the Department determined that FSI is a major source of HAPs and is subject to the provisions of 40 CFR 63, Subpart WWWW.

B. NESHAP Standards (Part 61)

As of the issuance date of this permit, the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

C. NSPS Standards (Part 60)

The Department is not aware of any currently applicable NSPS Standards that may be promulgated that will affect this facility.

D. Risk Management Plan

The Department is not aware of substances stored at this facility which exceeds the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than 3 years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

E. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard that is exempt under ARM 17.8.1503(2));
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emission of the applicable regulated air pollutant that is greater than major source thresholds.

This facility does not have an emitting unit which requires development of a CAM plan.

F. PSD and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the “light duty vehicle rule” (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG “Tailoring Rule” (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011, would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO₂e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO₂e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO₂e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO₂e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

Based on information provided by FSI, the facility’s potential emissions fall below the GHG major source threshold of 100,000 TPY of CO₂e for both Title V and PSD under the Tailoring Rule.