AIR QUALITY PERMIT

Issued To: Montana Fiberglass, Inc.
2063 Casino Creek Drive
Lewistown, MT 59457

Permit # 4069-00
Application Complete: 6/08/07
Preliminary Determination Issued: 7/18/07
Department Decision Issued: 8/3/07
Permit Final: 8/21/07
AFS # 027-0008

An air quality permit, with conditions, is hereby granted to Montana Fiberglass, Inc. (MFI), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Permitted Equipment

MFI operates a manufacturing facility that produces tanks and other products made from fiberglass. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Location

MFI is located in Section 22, Township 15 North, Range 18 East, in Fergus County. The physical address is 2063 Casino Creek Drive in Lewistown, Montana.

Section II: Conditions and Limitations

A. Operation and Emission Limitations

1. Volatile Organic Compound (VOC) emissions from the facility shall be limited to 48.4 tons during any rolling 12-month time period (ARM 17.8.749).

2. MFI shall not exceed the applicable organic Hazardous Air Pollutant (HAP) emission limits listed in Table 3 of 40 CFR 63 Subpart WWWW on a 12-month rolling basis. For operations characterized as open molding – corrosion resistant and/or high strength, the following limits apply (ARM 17.8.342, 40 CFR 63 Subpart WWWW):

   - Mechanical resin application 113 pounds HAP/ton resin (lb/ton)
   - Manual resin application 123 lb/ton
   - Filament 171 lb/ton
   - Nonatomized spray gel coat 605 lb/ton

3. MFI shall comply with all applicable standards and limitations contained in 40 CFR 63, Subpart WWWW, including the work practice standards specified in Table 4 (ARM 17.8.342, 40 CFR 63 Subpart WWWW).

4. MFI shall use high volume/low pressure (HVLP) non-atomizing spray systems (ARM 17.8.752).
5. MFI shall not cause or authorize to be discharged into the atmosphere from any

source, visible emissions that exhibit 20% opacity or greater averaged over 6 consecutive minutes (ARM 17.8.304).

6. MFI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

7. MFI shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of Montana's Source Test Protocol and Procedures Manual (ARM 17.8.106).

2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. MFI shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. MFI shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745 that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. MFI shall document, by month, the VOC and HAP emissions from the facility. By the 25th day of each month, MFI shall total the VOC and HAP emissions from the facility during the previous 12 months to verify compliance with the limitations in Section II.A.1 and Section II.A.2.

   For the fiberglass resin applications, the calculation of VOC and HAP emissions shall be based on the amount of each resin used, and the percentage of VOC and HAP in each resin. The emissions for the fiberglass process are to be calculated in accordance with the requirements of 40 CFR 63 Subpart WWWW.

   For painting or other processes emitting VOCs and HAPs, the emissions will be based on the amount of raw material used (such as paint and thinner) and the

percent VOC and HAP in each raw material (ARM 17.8.749).

4. MFI must record all data, assumptions, and calculations used to determine organic HAP emission factors or average HAP contents for the facility. MFI must document any changes in raw materials (including VOC and HAP contents) with records. A written report of compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.749).

5. MFI shall maintain on-site records demonstrating compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart WWWW. The records compiled in accordance with this permit shall be maintained by MFI as a permanent business record for at least 5 years and must be available at the plant for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Notification

MFI must submit to the Department all notifications and reports in accordance with the requirements of 40 CFR 63 Subpart WWWW (40 CFR Part 63).

Section III: General Conditions

A. Inspection - MFI shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if MFI fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving MFI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

D. Enforcement - Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.

F. Permit Inspection - As required by ARM 17.8.755 Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the

G. Permit Fee - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by MFI may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.

Permit Analysis
Montana Fiberglass, Inc.
Permit #4069-00

I. Introduction/Process Description

A. Permitted Equipment

Montana Fiberglass, Inc. (MFI) owns and operates a fiberglass manufacturing facility. The facility is located in Section 22, Township 15 North, Range 18 East, in Fergus County, Montana. The physical address is 2063 Casino Creek Dr., Lewistown, Montana. The equipment used at the facility includes, but is not limited to the following:

- Automatic Chop Hoop Winder;
- Four Chopper Guns;
- Helix Winder;
- Gelcoat Spray System (high volume/low pressure (HVLP) non-atomizing);
- Two pressure feed rollers;
- Two Used oil Burners (combined capacity up to 1 million British Thermal Unit (MMBTU));
- Propane Heater (up to 1 MMBTU);
- 2 Natural Gas Heaters (combined capacity up to 1 MMBTU); and
- Associated Equipment.

B. Source Description

MFI manufactures fiberglass reinforced products (FRP) for a variety of purposes. All products produced at MFI are characterized as "corrosion-resistant and/or high strength" due to properties required for each product. MFI utilizes open molding operations and all resins and gel coats are nonvapor-suppressed. Volatile Organic Compound (VOC) emissions, primarily styrene, result from the product manufacturing process. Styrene is a listed Hazardous Air Pollutant (HAP).

The first step is fabrication of a plug, typically from wood. After generating the rough shape, the plug is coated with primer or polyester gel coat to achieve the desired finish. 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 prepared for production by waxing the surface with the mold release wax.

The next step is to apply polyester gel coat on parts requiring colored surface or high gloss. Parts are usually gel coated in a booth and remain there to cure, or are moved outside of the booth for curing. Laminate structure is applied to the gel coated surface, or to the mold (when a finish is not required). Generally laminate is applied by hand, chopper gun, or pressure feed rollers. Acetone, which is not a VOC, is used for cleaning the application equipment.

Parts are removed from the mold after being wet trimmed, and the laminate is allowed to cure. Parts are then inspected, and sent for the final trim and finish.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   MFI shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM17.8.213 Ambient Air Quality Standards for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

MFI must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, MFI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.

7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

   40 CFR 63, Subpart WWWW National Emission Standards for Hazardous Air Pollutants (NESHAP): Reinforced Plastic Composites Production. Owners or operators of facilities that use thermoset resins and/or gel coats that contain styrene, and that are a major source of HAPs, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR 63, Subpart WWWW. Based on the information submitted by MFI, the facility is subject to the provisions of 40 CFR 63, Subpart WWWW because the facility uses thermoset resins and/or gel coats that contain styrene and is a major source of HAPs.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. MFI submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. MFI has a PTE greater than 25 tons per year of VOCs; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits—Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. MFI submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. MFI submitted an affidavit of publication of public notice for the May 9, 2007, issue of the *Lewistown News-Argus*, a newspaper of general circulation in the city of Lewistown in Fergus County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving MFI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

   This facility is not a major stationary source since it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 micron or less (PM_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #4069-00 for MFI, the following conclusions were made:

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is greater than 10 tons/year for any one HAP and greater than 25 tons/year of all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is not subject to a current NSPS.

   e. This facility is subject to current NESHAP standards.

   f. This facility is subject to a current Maximum Achievable Control Technology (MACT) standard.

   g. This source is not a Title IV affected source nor a solid waste combustion unit.

   h. This source is an EPA designated Title V source.

MFI is subject to Title V Operating Permit requirements because the source's potential HAP emissions are above the major source threshold. MFI must obtain a Title V operating permit from the Department.

III. BACT Determination

A BACT determination is required for each new or altered source. MFI shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized.

MFI manufactures fiberglass reinforced products (FRP) for a variety of purposes. All of the products produced are corrosion-resistant or high-strength, open molding manufacture, via a combination of mechanical or manual methods. As such, MFI is required to meet the open-molding emission limits in the MACT standard for corrosion-resistant and/or high strength products. However, the Department requires each source to continually review the BACT options available for their source.

VOC emissions, primarily styrene, result from the product manufacturing process at MFI. Styrene is a listed HAP. In general, styrene emissions can be reduced: (1) using resin materials and application equipment that generate less styrene emissions, (2) improving operator techniques to reduce overspray, (3) changing open-molding processes to closed-molding processes, and/or (4) using add-on emission control devices.

Control Technologies evaluated by MFI were divided into two broad categories: end-of pipe control to destruct VOC/HAP emissions, or process/raw material modifications to reduce the VOC/HAP emissions. The following are potential VOC/HAP control options that were considered for MFI:

End-of-Pipe Control

- Thermal Oxidation – regenerative
- Thermal Oxidation – direct flame with catalytic converter
- Thermal Oxidation – direct flame
- Carbon Adsorption – regenerative granulated activated carbon (GAC)
- Carbon Adsorption – single use
- Refrigeration/Distillation

Process Modifications

- Closed Mold
- Vapor Suppressed Resin
- Low Styrene Resin
- HVLP non-atomized equipment

VOC control/removal efficiencies of 95 percent were assumed for each of the end-of pipe technology reviewed. A brief description of VOC removal is as follows:

- Granular activated carbon systems remove VOCs through adsorption by the activated (heated) carbon.
- Thermal oxidation systems combust/oxidize VOCs.
- Refrigeration and distillation systems are based on cooling of the gas resulting in condensing of the VOCs and collection.

In order to evaluate and rank the options available to MFI, the applicant identified potential control equipment and provided the following table that lists the technologies and the estimated cost/ton of pollutant removed.

Control Equipment*	$/Ton

HVLP Application	No cost option
Thermal Oxidation (Regenerative)	6,070
Low Styrene Resin	7,588
Vapor-phase GAC, 2 systems (Regenerative System)	9,207
Thermal Oxidation (Direct Flame w/ Catalytic Converter)	11,382
Vapor-phase granular activated carbon (GAC) (Single Use)	14,946
Thermal Oxidation (Direct Flame)	16,263
Refrigeration/Distillation	66,541

*These cost estimates were provided by the applicant and MAQP # 3343-00

According to the applicant, add-on control technology usually requires significant capital expenditures, are typically costly to operate, and generally add no value to the process or product. Capital and operating costs of all emission control devices are strongly related to the flow rate of the incoming stream. In order to make add-on controls economical, the system must concentrate the exhaust air stream (i.e. into a stack) using improved air flow management practices or enclosures, before application of add-on emission control devices. The above potential controls would require MFI to treat all of the air in the building(s) and would require significant start-up costs, as well as on-going fuel, energy and maintenance costs. According to the applicant, it was evident that the capital and operating costs of a ventilation system and add-on controls would place MFI at an economic disadvantage and MFI would not be able to operate.

Based on the amount of emissions, the capital expenditures that would be required for a ventilation system and end-of-pipe control, and the fact that at current operating levels MFI can meet emission limits without add-on controls; the Department concurs with that determination. Therefore, all of the add-on control measures listed as end-of-pipe controls were not considered as a viable option for MFI.

The following table lists the remaining options that were evaluated by MFI:

Process Modifications
Change from open to closed mold
Use of low Styrene resins
Use of vapor suppressed resins
HVLP Application

According to MFI, it is technically infeasible for this facility to change from open-mold to closed-mold, due to the type and size of products constructed.

During testing at MFI over the past several years, low styrene resins and vapor suppressed resins resulted in many product failures that required warranty replacement and/or repairs; and resulted in negative economic impacts to MFI. As shown in the table below, replacement of the most commonly used resin RCI GP (98.1% of the facility's total resin use) shows it is not economical to replace this resin.

Resin	**Use**	**Unit Cost**	**Annual Cost**	**% Styrene**	**Emissions**
Ortho 30	408,685 lbs	$1.10/lb	$449,553.50	33.0 %	18,442.0 lbs
COR61 AB-545	408,685 lbs	$1.22/lb	$498,595.70	32.0%	17,871.8 lbs
DIFFERENCE	--	$0.12/lb	$49,042.20		570.2 lbs

The replacement cost to MFI would be $49,042 per year with an offset of calculated styrene emissions at 570.2 lbs/year (or 0.28 tons/year (TPY)). In addition to cost factors, vapor suppressed resins contain a surfactant such as wax, which can cause extreme problems with secondary applications of resins. The facility also noted that the tensile strength required for their final product can not be obtained with low styrene resins or vapor suppressed resins. Both vapor suppressed resins and low styrene resins were eliminated from review based on cost and applicability.

MFI currently operates with HVLP equipment and proposes to continue to operate HVLP with no additional controls. The Department found that the use of HVLP spray systems constitutes BACT, and emissions from the facility would be limited to 48.4 TPY.

In addition to utilizing HVLP equipment, MFI can minimize emissions during spray painting by: developing techniques aimed at reducing overspray to achieve emission reductions, using spray tips that are sized for specific applications, adjusting tip pressure to as low as possible to produce an acceptable spray pattern, and spray operator training.

Other ways to reduce emissions include using good housekeeping techniques, such as storing all materials and solvent containers with lids properly sealed to prevent evaporation when not in use, performing preventative maintenance on all equipment for proper operation, and storing solvents and waste properly.

Spray Painting

MFI conducts spray painting inside one of two buildings, primarily on large and/or medium sized FRP tanks. The paint used is a 'speed set enamel' paint that requires the addition of a small amount of thinner such as xylene. Based on past purchase records for MFI it is estimated that approximately 1,200 gallons of paint and 200 gallons of thinner would be used annually at current business levels, resulting in 5.3 TPY of VOC emissions. Because the emissions from painting are so low any additional controls would be cost-prohibitive. Therefore, the Department determined that no additional control would constitute BACT for the painting operation.

All control options selected for MFI are comparable to other recently permitted sources and are capable of achieving the appropriate emission limits.

IV. Emission Inventory

Source	Tons of VOC/Year
Chopper guns	11.7
Pressure Feed Rollers	5.85
Helix Winder	8.00
Chop Hoop Winder	8.00
Gel Coat System Mechanical Manual*	 7.13 2.18
Paint and Thinner*	5.30
Mold Release*	0.24
Total	**48.4**

*Note: These were not included in MFI's calculations for potential to emit.

Chopper Gun (4)

VOC Emission Factor: 0.67 lb/hr (Company Information)
Calculations: 0.67 lb/hr * 4 chopper guns * 8760 hr/yr * 0.0005 ton/lb = 11.7 ton/yr

Pressure Feed Rollers (2)

VOC Emission Factor: 0.67 lb/hr (Company Information)
Calculations: 0.67 lb/hr * 2 rollers* 8760 hr/yr * 0.0005 ton/lb = 5.85 ton/yr

Helix Winder (1)

VOC Emission Factor: 1.826 lb/hr (Company Information)
Calculations: 1.826 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.0 ton/yr

Venus Automatic Chop Hoop Winder (1)

VOC Emission Factor: 1.826 lb/hr (Company Information)
Calculations: 1.826 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.0 ton/yr

Gelcoat Application

Mechanical VOC Emissions

Emission Factor: 1.63 lb/hr (Company Information)
Calculations: 1.63 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.13 ton/yr

Manual VOC Emissions

Emission Factor: 0.497 lb/hr (Company Information)
Calculations: 0.497 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.18 ton/yr

Paint & Thinner

1,200 gallons of paint and 200 gallons of thinner were determined to be the maximum annual amount required at MFI.

1,200 gallons x 7.6 lbs VOC/gallon	= 9,120 lbs
200 gallons x 7.6 lbs VOC/gallon	= 1,520 lbs
Emissions:	= 10,640 lbs or 5.3 tpy

Wax Mold Release

VOC Emission Factor: 0.056 lb/hr (Company Information)
Calculations: 0.056 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.24 ton/yr

V. Air Quality Impacts

MFI is located in Section 22, Township 15 North, Range 18 East, in Fergus County. The physical address is 2063 Casino Creek Drive in Lewistown, Montana. The air quality of this area is classified as either better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

VI. Ambient Air Impact Analysis

The Department believes that the emissions from the facility will not cause or contribute to a violation of any ambient air quality standard. However, it is important to note that Montana does not have an ambient air quality standard for styrene. The Department has also determined that the impact from this permitting action will be minor.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined that there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Montana Fiberglass, Inc.
2063 Casino Creek Drive
Lewistown, MT 59457

Air Quality Permit Number: 4069-00

Preliminary Determination Issued: 7/18/07
Department Decision Issued: 8/3/07
Permit Final: 8/21/07

1. *Legal Description of Site*: MFI is located in Section 22, Township 15 North, Range 18 East, in Fergus County. The physical address is 2063 Casino Creek Drive in Lewistown, Montana.

2. *Description of Project*: The current permit action would allow the operation of a manufacturing facility that produces tanks and other fiberglass products. The process description is discussed in Section I.B. of the permit analysis of Permit #4069-00.

3. *Objectives of Project*: The objective of the project would be to generate business and revenue for the company and to continue to supply fiberglass products.

4. *Alternatives Considered*: In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because MFI demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in Permit #4069-00.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and would not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the project on the human environment. The "no-action" alternative was discussed previously.

Potential Physical and Biological Effects							
		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Terrestrial and Aquatic Life and Habitats			X			Yes
B.	Water Quality, Quantity and Distribution			X			Yes
C.	Geology and Soil Quality, Stability and Moisture			X			Yes
D.	Vegetation Cover, Quantity and Quality			X			Yes
E.	Aesthetics		X				Yes
F.	Air Quality			X			Yes
G.	Unique Endangered, Fragile or Limited Environmental Resource				X		Yes
H.	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I.	Historical and Archaeological Sites				X		Yes
J.	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The Department has prepared the following comments.

A. Terrestrial and Aquatic Life and Habitats

Emissions from the operation could affect terrestrial and aquatic life and habitats in the project area. However, any emissions and resulting impacts from the operation would be minor due to the location of the facility, and the relatively low concentration of the pollutants emitted.

The operation would occur within existing buildings and no new construction or ground disturbance to the area would be required. Overall, any impact to the terrestrial and aquatic life and habitats of the project area would be minor.

B. Water Quality, Quantity and Distribution

The operation would not affect water quantity or distribution in the project area. The operation would continue to take place within existing facilities and would not discharge process water as part of the project.

Emissions from the project could affect water quality in the project area. However, as described in Section 7.F of this EA, any emissions and resulting deposition impacts from the project would be minor due to the low concentration of the pollutants emitted and dispersion characteristics of pollutants and the atmosphere.

C. Geology and Soil Quality, Stability, and Moisture

The operation could affect the geology, soil quality, stability, and moisture of the project area. The operation would take place within existing facilities and no new construction or ground disturbance to the area would be required. However, the operation would result in minor air pollution emissions to the ambient environment. Any impact from deposition of these pollutants would be minor due to dispersion characteristics of pollutants and the atmosphere and the low concentration of the pollutants emitted.

D. Vegetation Cover, Quantity, and Quality

The operation would take place within an existing building(s) and no new construction or ground disturbance to the area would be required. The Department contacted Montana Natural Heritage Program (MNHP) in an effort to determine if there are any species of concern in or near this area. MNHP noted that there are no species of concern in the area. Emissions from the operation could affect vegetation cover, quantity, and quality in the project area; however, pollutants would be widely dispersed before settling upon vegetation and surrounding soils. The Department believes that any resulting impacts from the emissions for this project would be minor, if any.

E. Aesthetics

The operation would take place within an existing building and no new construction would be required. MFI is located approximately 1,000 feet from Lewistown, Montana. Visible emissions from the source would be limited to 20% opacity, and noise generated by the operation would be minor due to the nature of the business.

MFI may have a moderate impact on the aesthetic nature of the project area. Styrene has a very low odor threshold (0.32 ppm according to the EPA) and the odor does not tend to dissipate very readily. MFI utilizes exhaust fans and open doors as a method of dispersing emissions from the building, since styrene has such a low odor threshold, nearby residents could be impacted by odor nuisance. Overall, the operation would have minor to moderate impacts to the aesthetics of the immediate area.

F. Air Quality

The air quality impacts from MFI would be minor, with most of the impact on the proximate neighbors. The proposed project would result in the emission of various air pollutants, the vast majority of which would be styrene, a regulated VOC and HAP. Because MFI has the potential to emit over 10 tons per year of styrene, the source will be classified as a major Title V source.

Permit #4069-00 would include conditions limiting the opacity. However, Montana does not have ambient air quality standards for styrene, or an odor regulation. According to the Occupational Health and Safety Administration (OSHA), facilities must limit their workers' exposure to styrene at an average of 100 ppm for an 8-hour workday, 40-hour workweek.

Although VOC is a contributor to ozone, given the low amount of emissions, MFI would not be expected to cause an exceedence of any ozone air quality standard. The Department determined that the facility, operating under the limits and conditions included in this permit would not cause or contribute to a violation of any applicable ambient air quality standard. The Department determined that ambient air impacts from this permitting action would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program (MNHP). This search indicated that there would be no species of special concern in the project area, or in the vicinity. Therefore, the Department determined that there would not be an impact to unique endangered, fragile, or limited environmental resources.

H. Demands on Environmental Resource of Water, Air, and Energy

The operation would result in minor demands on the environmental resource of water and air, as discussed in Sections 7.B and 7.F of this EA. Because the operation is small by industrial standards, a relatively small amount of energy would be required for operation, and the resulting impact on energy resources would be minor; the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are no previously recorded historic or archaeological sites within the project area. Given the low likelihood that cultural resources exist in the area, the Department determined that the project would not impact any cultural or historic sites.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the operation. The Department believes that this facility would operate in compliance with all applicable rules and regulations as outlined in Permit #4069-00.

8. The following table summarizes the potential economic and social effects of the project on the human environment. The "no-action" alternative was discussed previously.

Potential Economic and Social Effects							
		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Social Structures and Mores			X			Yes
B.	Cultural Uniqueness and Diversity				X		Yes
C.	Local and State Tax Base and Tax Revenue			X			Yes
D.	Agricultural or Industrial Production			X			Yes
E.	Human Health			X			Yes
F.	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G.	Quantity and Distribution of Employment			X			Yes
H.	Distribution of Population				X		Yes
I.	Demands for Government Services			X			Yes
J.	Industrial and Commercial Activity			X			Yes
K.	Locally Adopted Environmental Plans and Goals				X		Yes
L.	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The Department has prepared the following comments.

A. Social Structures and Mores

The nearest home would be located approximately 300 yards from the facility and could potentially be impacted by styrene odor from the facility. The predominant use of the surrounding area is industrial/commercial and would not change as a result of the project. The Department believes the operation would have minor effects on any native or traditional lifestyles or communities (social structures or mores) of the proposed area of operation because the project is small by industrial standards.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by MFI because the facility would be small by industrial standards and would operate at the same level as it has in the past. The predominant use of the surrounding area would remain as industrial/commercial. Therefore, the cultural uniqueness and diversity of the area would not be affected.

C. Local and State Tax Base and Tax Revenue

The project would have a minor impact on the local and state tax base and tax revenue. There would be approximately 20 employees required for this facility. Because the project would be considered small by industrial standards, any economic impact to the area would be minor.

D. Agricultural or Industrial Production

MFI would have a minor impact on local industrial production. MFI would operate in an existing industrial building(s) located in an area that is predominantly industrial/commercial. There would not be a change in agricultural production and minor changes to local industrial production due to MFI production of fiberglass products. MFI has been in operation since 2000, but over the past year, the facility has expanded. Overall, changes to agricultural and industrial production in the area would be minor.

E. Human Health

There may be minor effects on human health due to the emission of pollutants (primarily styrene). According to the Agency for Toxic Substances and Disease Registry (ATSDR) breathing high levels of styrene for a short-time, could result in impacts to the nervous system, as well as, eye, nose, and throat irritation. However, high level exposure to styrene would occur from breathing indoor air (i.e. inside MFI) that is contaminated with styrene vapors. There is little known evidence on human health effects of breathing low levels of styrene for a long period of time. Permit #4069-00 incorporates conditions to ensure that the facility would operate in compliance with all applicable rules and standards, and these rules and standards are designed to protect human health. There could be a moderate risk to human health with long term exposure to high concentrations (>100 ppm) of styrene, but it is unlikely that the concentration of styrene would exceed this level except within the building. Therefore, the Department believes that there would be a minor risk to human health in the surrounding area.

F. Access to and Quality of Recreational and Wilderness Activities

Because the facility would operate in an existing building located in an area that is predominantly industrial/commercial, the project would not affect any access to or quality of any recreation or wilderness activities in the area.

G. Quantity and Distribution of Employment

MFI will employ approximately 20 people. Because MFI has been in operation since 2000 and the size and nature of the project would remain essentially the same, the Department believes the project would have a minor impact on the quantity and distribution of employment in the area.

H. Distribution of Population

MFI is located near Lewistown, Montana which has a population of approximately 6,000. MFI would employ approximately 20 people. Given the size of the facility and the location, the Department believes that MFI would have minor impacts, if any, to the distribution of population in the project area.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Demands for government services would be minor.

J. Industrial and Commercial Activity

MFI would operate in an existing building and would require no new construction. The facility would employ approximately 20 employees. The Department believes that the operation would result in a minor impact, if any, to local industrial and commercial activity.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals in the immediate area affected by the project. Because the facility is existing, the Department believes this project would not impact or change any other environmental plans and goals.

L. Cumulative and Secondary Impacts

MFI would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be considered small by industrial standards. Minor health effects could occur from styrene (HAP); however, the concentration of styrene near residential areas would be low due to dispersion and would mainly be an odor irritant. Further, few industrial operations, if any, would be expected to result from permitting this facility. Any minor increase in traffic would have little effect on local traffic in the immediate area. Because the source would be relatively small, only minor economic impacts to the local economy would be expected from operating the facility. Further, any cumulative impacts upon the social and economic aspects of the human environment would be minor. Thus, only minor and temporary cumulative and secondary effects would result.

Recommendation: An Environmental Impact Statement (EIS) is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action would be to continue operation of a manufacturing facility. Permit #4069-00 includes conditions and limitations to ensure that the facility would operate in compliance with all applicable rules and regulations. In addition, as detailed in the above EA, there are few impacts associated with the project.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Natural Heritage Program, National Resource Information System (NRIS) and Montana Historical Society, State Historic Preservation Office (SHPO).

Individuals or groups contributing to this EA: Department of Environmental Quality Permitting and Compliance Division (Air Resources Management Bureau), Montana Natural Heritage Program, State Historic Preservation Office.

EA prepared by: Jenny O'Mara
Date: 07/11/07