

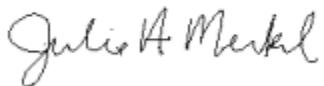
June 21, 2021

Greg Jones, Facilities Manager  
Gibson Brands, Inc. – Bozeman Division  
1894 Orville Way  
Bozeman, MT 59715

Dear Mr. Jones:

Montana Air Quality Permit #5257-00 is deemed final as of June 19, 2021, by the Department of Environmental Quality (Department). This permit is for an acoustic guitar manufacturing facility. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,



Julie A. Merkel  
Permitting Services Section Supervisor  
Air Quality Bureau  
(406) 444-3626



Ed Warner  
Lead Engineer, Permitting Services Section  
Air Quality Bureau  
(406) 444-2467

JM:EW  
Enclosure

Montana Department of Environmental Quality  
Air, Energy & Mining Division

Montana Air Quality Permit #5257-00

Gibson Brands, Inc. – Bozeman Division  
1894 Orville Way  
Bozeman, MT 59715

June 19, 2021



## MONTANA AIR QUALITY PERMIT

Issued To: Gibson Brands, Inc. – Bozeman Division  
1894 Orville Way  
Bozeman, MT 59715

MAQP: #5257-00  
Application Complete: 4/07/2021  
Preliminary Determination Issued: 4/30/2021  
Department's Decision Issued: 6/3/2021  
Permit Final: 06/19/2021

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Gibson Brands, Inc. (Gibson), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### Section I: Permitted Facilities

#### A. Permitted Equipment

Gibson produces fine acoustic guitars at their Bozeman facility. The production process includes sanding, shaping, joining, gluing, and finishing the guitars. Solid particulates generated from the woodworking processes are captured by a closed-loop system with no exhaust to the outside atmosphere. Air pollutant emissions to the atmosphere of particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants (HAP) occur from the finishing processes which include various lacquer, sealer, and washcoat applications utilizing pressurized spray guns. All spray operations occur in booths with negative pressure air circulation which exhausts through dry filters for PM control before exiting to the atmosphere. The table below summarizes the main emitting points.

ID Number	Emitting Unit Name	Pollution Control Device
1	Lacquer – Main Booth	Dry filter
2	Sealer and Washcoat – Touch-up Booth	Dry filter
3	Small Touch-up Booth – “minis”	Dry filter
4	Color (CB1)	Dry filter
5	Color (CB2)	Dry filter
6	Sealer (CB3)	Dry filter

#### B. Plant Location

Gibson is located at 1894 Orville Way, Bozeman, Montana. The legal description is NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 35, Township 1 South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is -111.062877.

## Section II: Conditions and Limitations

### A. Emission Limitations

1. Emissions of volatile organic compounds (VOC) shall not exceed 80 tons per year (tpy) during any consecutive 12-month rolling period (ARM 17.8.1204).
2. Emissions of any individual hazardous air pollutant (HAP) shall not exceed 10 tpy during any consecutive 12-month rolling period (ARM 17.8.1204).
3. Emissions of combined HAPs shall not exceed 25 tpy during any consecutive 12-month rolling period (ARM 17.8.1204).
4. Gibson shall limit the coating volumes used in the sprayer operations such that the sum of the VOC emissions does not exceed the level described in Section II.A.1. Any calculations used to establish VOC emissions shall be approved by the Montana Department of Environmental Quality (Department) and shall be based on the documented VOC density of the coatings, unless otherwise allowed in writing by the Department (ARM 17.8.749).
5. Gibson shall limit the coating volumes used in the sprayer operations such that the sum of any individual HAP emissions does not exceed the level described in Section II.A.2. Any calculations used to establish individual HAP emissions shall be approved by the Department and shall be based on the documented individual HAP density of the coatings, unless otherwise allowed in writing by the Department (ARM 17.8.749).
6. Gibson shall limit the coating volumes used in the sprayer operations such that the sum of all combined HAP emissions does not exceed the level described in Section II.A.3. Any calculations used to establish combined HAP emissions shall be approved by the Department and shall be based on the documented HAP densities of the coatings, unless otherwise allowed in writing by the Department (ARM 17.8.749).
7. Gibson shall conduct all sprayer operations within dedicated spray booths with negative pressure air circulation systems for capturing overspray that exhaust through a dry filter system, or a demonstrated equivalent form of control, prior to release to the atmosphere (ARM 17.8.752).
8. Gibson shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana 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. Gibson 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 to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). Gibson shall submit the following information annually to the Department by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

- a. The company identification of each spray coating used during the emissions reporting year.
- b. The VOC, individual HAP, and combined HAP content of each coating in pounds per gallon (lbs/gallon), as applied during the emissions reporting year.
- c. The number of gallons of each coating used on a rolling 12-month basis during the emissions reporting year.
- d. The VOC, individual HAP, and combined HAP emissions rate, in tons per year on a rolling 12-month basis, for each coating used during the emissions reporting year. Gibson shall provide the calculation methodology used in determining these emissions rates.

2. Gibson shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, 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. The notice must be submitted to the Department, in writing, 10 days prior to startup 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(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Gibson as a permanent business record for at least 5 years following the date of

the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request. These records may be stored at a location other than the plant site upon approval by the Department (ARM 17.8.749).

3. Gibson shall document, by month, the volumes used of each coating product.
  - a. By the 25<sup>th</sup> day of each month, Gibson shall calculate the VOC emissions based on these volumes as directed in Section II.A.4 for the previous month. The monthly information will be used to verify compliance with the rolling 12-month VOC limitation in Section II.A.1. The monthly and rolling 12-month VOC emissions for each of the previous 12 months shall be submitted along with the annual emission inventory (ARM 17.8.749).
  - b. By the 25<sup>th</sup> day of each month, Gibson shall calculate all individual HAP emissions based on these volumes as directed in Section II.A.5 for the previous month. The monthly information will be used to verify compliance with the rolling 12-month individual HAP limitation in Section II.A.2. The monthly and rolling 12-month individual HAP emissions for each of the previous 12 months shall be submitted along with the annual emission inventory (ARM 17.8.749).
  - c. By the 25<sup>th</sup> day of each month, Gibson shall calculate the combined HAP emissions based on these volumes as directed in Section II.A.6 for the previous month. The monthly information will be used to verify compliance with the rolling 12-month combined HAP limitation in Section II.A.3. The monthly and rolling 12-month combined HAP emissions for each of the previous 12 months shall be submitted along with the annual emission inventory (ARM 17.8.749).
4. Gibson shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

### SECTION III: General Conditions

- A. Inspection – Gibson 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 such as Continuous Emission Monitoring Systems (CEMS) or Continuous Emission Rate Monitoring Systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Gibson fails to appeal as indicated below.

- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Gibson 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 action 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 therefor, 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 the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Gibson may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit Analysis  
Gibson Brands, Inc. – Bozeman Division  
MAQP #5257-00

## I. Introduction/Process Description

Gibson Brands, Inc. – Bozeman Division (Gibson) owns and operates a manufacturing facility for fine acoustic guitars located in Bozeman, Montana. Gibson is located at 1894 Orville Way, Bozeman, Montana. The legal description is NE<sup>1/4</sup> of the SE<sup>1/4</sup> of Section 35, Township 1 South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is -111.062877.

### A. Permitted Equipment

The table below summarizes the main emitting points.

ID Number	Emitting Unit Name	Pollution Control Device
1	Lacquer – Main Booth	Dry filter
2	Sealer and Washcoat – Touch-up Booth	Dry filter
3	Small Touch-up Booth – “minis”	Dry filter
4	Color (CB1)	Dry filter
5	Color (CB2)	Dry filter
6	Sealer (CB3)	Dry filter

### B. Source Description

Gibson produces fine acoustic guitars at their Bozeman facility. The production process includes sanding, shaping, joining, gluing, and finishing the guitars. Solid particulates generated from the woodworking processes are captured by a closed-loop system with no exhaust to the outside atmosphere. Air pollutant emissions to the atmosphere of particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants (HAP) occur from the finishing processes which include various lacquer, sealer, and washcoat applications utilizing pressurized spray guns. All spray operations occur in booths with negative pressure air circulation which exhausts through dry filters for PM control before exiting to the atmosphere.

### C. Response to Public Comments

Person/Group Commenting	Permit Reference	Comment	Department Response
No comments received			

## 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 location 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 (including instruments and sensing devices) 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).

Gibson 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 the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

11. ARM 17.8.230 Fluoride in Forage

Gibson 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.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing 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.
8. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.
9. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 63, as appropriate.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.402 Requirements. Gibson must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or modified stack for Gibson is below the allowable 65-meter GEP stack height.

E. 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. Gibson 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 prorate the required fee amount.

F. 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 person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Gibson has a PTE greater than 25 tons per year of PM and VOC 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, modification, or use of a source. Gibson 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. Gibson submitted an affidavit of publication of public notice for the March 18, 2021 issue of the *Bozeman Daily Chronicle*, a newspaper of general circulation in the Town of Bozeman in Gallatin 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 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 Gibson 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 modified 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.

G. 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 Modifications--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 because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. 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 source having:
  - a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one hazardous air pollutant (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 microns or less ( $PM_{10}$ ) in a serious  $PM_{10}$  nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (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 MAQP #5257-00 for Gibson, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for any pollutant when considering enforceable permit conditions.
- b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs when considering enforceable permit conditions.
- c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
- d. This facility is not subject to any current NSPS.
- e. This facility is not subject to any current NESHAP.
- f. This source is not a Title IV affected source, or a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.
- h. As allowed by ARM 17.8.1204(3), the Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's potential to emit.
  - i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit, does not require the source to obtain an air quality operating permit.
  - ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

Gibson has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness.

Gibson shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

Based on these facts, the Department determined that Gibson will be a minor source of emissions as defined under Title V based on the requested federally enforceable permit limits.

### III. BACT Determination

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

A BACT analysis was submitted by Gibson in permit application #5257-00, addressing some available methods of controlling particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants (HAP) emissions from coating operations. The Department reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determination.

Gibson's Bozeman facility is used for acoustic guitar production. The production process includes sanding, shaping, joining, gluing, and finishing fine acoustic guitars. Solid particulates generated from the woodworking processes are captured by a closed-loop system with no exhaust to the outside atmosphere and are therefore not subject to BACT. Air pollutant emissions to the atmosphere of PM, VOC, and HAP occur from the finishing processes which include various lacquer, sealer, and washcoat applications utilizing pressurized spray guns. There are currently six different spray guns with associated booths, with primary lacquer application occurring with a high volume low pressure (HVLP) sprayer and the remaining 5 sprayers employing air atomization. Lacquer application is the predominant coating activity with up to nine coats of lacquer sprayed per guitar. The spray guns spray a shaped stream of lacquer as the guitars rotate on a conveyor system. A typical guitar body lacquer application requires about one minute to completely cover the entire instrument. The remaining spray booths are used for sealer and washcoat, touch-up, and coloring. These booths utilize far less coating product than the lacquer booth.

#### **Particulate Matter**

Coating operations result in PM emissions from overspray, where coating product does not make contact and adhere to the intended surface and is instead dispersed into the air and away from the application site. The amount of overspray that occurs during operation is a function of the transfer efficiency of the sprayer used to apply the coating product. While some technologies have superior transfer efficiency, there can be tradeoffs in the quality and characteristics of the finish. Gibson proposed the continued use of spray booths with negative pressure air circulation system that exhaust through dry filters and then to the atmosphere. According to MAQP application #5257-00, the dry filters provide 80-85% PM control efficiency and are changed out multiple times per day as needed. The Department concurs that this satisfies BACT for PM from the finish coating activities. Because the finish coating activities are not a continuous operation where the measurement of PM by federal reference methods could be carried out while operating at a steady state, the Department prescribes a work practice standard of operating the spray guns within the booths employing negative pressure air circulation systems that exhaust through dry filters in lieu of a numerical emission standard.

#### **Volatile Organic Compounds and Hazardous Air Pollutants**

VOC and HAP emissions are inherent to the coatings products that Gibson uses to finish the guitars. The VOCs are organic chemical compounds whose composition makes it possible for

the liquids portion of the coating to evaporate under normal atmospheric conditions, leaving the solids portion of the coating to remain on the surface to achieve the desired finishing effect. The solids portion of the coating can contain HAP, which are commonly used in pigments. The liquids portion can also contain HAP. The VOC and HAP are emitted to the atmosphere from the overspray as well as from evaporation during drying. VOC and HAP are analyzed together because they employ the same methods of emissions control. Gibson identified carbon adsorption systems and thermal oxidizers as potential add-on control technologies for reducing emissions of VOC and HAP from the finishing operations.

Thermal oxidation (TO) is recognized as the most effective way to thermally destroy VOCs from coating operations; however, it is one of the most expensive. VOC-laden exhaust gases are ducted into regenerators where a high-density media such as ceramic-packed bed that is still hot from a previous cycle. The exhaust gases are preheated and then passed through a combustion chamber where they are heated by auxiliary fuel combustion to a final oxidation temperature typically between 1400 to 1500 degrees Fahrenheit (F°) and maintained at this temperature to achieve maximum VOC destruction. The hot exhaust is then directed to one or more different ceramic-packed beds cooled by an earlier cycle. Heat from the exhaust is absorbed by these beds before the gases are released to the atmosphere. The reheated packed bed then begins a new cycle by heating a new incoming waste gas stream (EPA-452/F-03-021). Gibson indicated that it is currently not possible to incorporate a TO system due to the size of the parts and practicality of installing new hoods and equipment. Typical costs for TO systems range from \$100,000 to over \$500,000, depending on system size, installation location, and the type selected.

Carbon adsorption involves emission flow through an activated carbon bed that adsorbs VOC from the exhaust stream. The highly porous activated carbon provides a large effective surface area to adsorb the VOC. Once the carbon bed has been saturated, the carbon is either removed and replaced or regenerated. Activated carbon can be manufactured specifically for coating applications and type of VOCs generated. Gibson indicated that a complete system modification would be required with respect to blowers, ventilation ductwork, control panels, and other instrumentation. Therefore, a carbon adsorption system is not feasible due to substantial installation and operating costs.

Gibson has proposed voluntary limitations on operations such that maximum allowable levels of VOC would not exceed 80 tons per year, combined HAP emissions would not exceed 25 tons per year, and any individual HAP would not exceed 10 tons per year. These voluntary limits would classify the Bozeman facility as a synthetic minor source of emissions. They would also represent a nearly 87% reduction in potential VOC emissions and a 69% reduction in potential combined HAP emissions. Individual HAP emission levels would not exceed major source levels prior to the voluntary limitation; however, a limit on allowable individual HAP emissions provides a more-complete limitation on operations that would prevent a major source determination. Gibson would demonstrate compliance with these emission limitations via mass balance equations and recordkeeping for volumes of coating product used throughout the year. This strategy provides Gibson the flexibility to utilize other finish coating products that may not have been contemplated in the MAQP application, as well as allow for some process and/or equipment upgrades to occur without affecting allowable emissions levels.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### IV. Emission Inventory

CO = carbon monoxide  
 (fil) = filterable  
 HAPs = hazardous air pollutants  
 hp = horsepower  
 lb = pound  
 N/A = not applicable  
 ND = no data available  
 NOx = oxides of nitrogen  
 PM = particulate matter

PM<sub>10</sub> = particulate matter with an aerodynamic diameter of 10 microns or less  
 PM<sub>2.5</sub> = particulate matter with an aerodynamic diameter of 2.5 microns or less  
 SO<sub>2</sub> = sulfur dioxide  
 TPH = tons per hour  
 TPY = tons per year  
 VOC = volatile organic compounds  
 yr = year

Gibson Brands Coating Product	Coating VOC Density (lbs/gal)	Total HAPs by wt. (lbs/gal)	Single HAPs by wt. (lbs/gal)	Single HAP (highest percentage)
LACQUER - FLOAT COAT - T75CH60 - S.W.	5.90	--	--	--
LACQUER - GLOSS - T75CH0056 - S.W.	5.92	0.62	0.04	Methyl isobutyl ketone
SEALER - T65CH0001 - S.W.	6.08	1.02	0.09	Methyl isobutyl ketone
LACQUER - SATIN - T75XXC13600 - S.W.	5.86	0.62	0.03	Methyl isobutyl ketone
TOBACCO BROWN - T65XXN9780 - S.W.	5.89	--	--	--
SUNBURST YELLOW - T65XXY7950 - S.W.	6.38	1.00	0.07	Methanol
UNITONE - T65XXN12350 - S.W.	6.06	1.02	0.08	Methyl isobutyl ketone
AUTHENTIC CHERRY - T65XXR76946 - S.W.	6.28	1.08	0.06	Methyl isobutyl ketone
HCS TRUE VINTAGE - T65XXXN7949	6.28	1.11	0.07	Methanol
HERITAGE CHERRY SUNBURST - T65XXN7948	2.51	0.10	0.10	Cobalt compound
EBONY LACQUER - T75XXB7916 - 1426 - S.W.	5.88	0.60	0.03	Methyl isobutyl ketone
ANTIQUE - T65XXY8307	6.32	1.29	0.09	Toluene

#### References:

**Certified Sherwin Williams Product Sheet**  
**Volatile Organic Compounds (including exempt) - US Environmental Protection Agency**  
**Hazardous Air Pollutants - Clean Air Act Section 112 (6)**

**Gibson Brands - Potential to Emit (PTE) Prior to Synthetic Minor Limits Calculation Table**

Booth No.	Gibson Brands Coating Product	Coating VOC Density (lbs/gal)	Maximum Spray Volume Capacity (gal/min)	Number of sprayers	Min/Yr	Lbs/Ton	PTE (VOC tons/year)	Coating total HAP density (lbs/gal)	Coating single highest HAP density	PTE (Total HAP tons/year)	PTE (Individual HAP tons/year)
1	LACQUER - FLOAT/GLOSS COAT	5.92	0.25	1	525,600	2,000	388.94	0.62	0.04	40.73	2.63
2	SEALER and WASH COAT.	6.08	0.026	1	525,600	2,000	41.54	1.02	0.09	6.97	0.61
3	TOUCH-UP	5.92	0.026	1	525,600	2,000	40.45	1.02	0.09	6.97	0.61
4,5,6	COLOR BOOTHS (combined)	6.38	0.026	3	525,600	2,000	130.78	1.29	0.10	26.44	2.05
<b>Total</b>		--	--	6	--	--	<b>601.72</b>			<b>81.12</b>	<b>5.91</b>

**References:**

**Certified Sherwin Williams Product Sheet**

**Volatile Organic Compounds (including exempt) - US Environmental Protection Agency**

**Booth No. 1 = 0.25 gal/minute maximum spray volume capacity**

**Booth No. 2 - 6 = 0.026 gal/minute maximum spray volume capacity**

**Potential to Emit is based on the following formula:**

**(coating VOC density lbs/gal) (spray maximum gallons/minute)(# of sprayers)(525,600 minutes/year) /2,000 = PTE tons per year.**

**Calculations based on maximum sprayer volume for each sprayer running continuously for a year.**

**Note that Gibson is subject to rolling 12-month emissions limitations of 80 TPY VOC, 25 TPY of combined HAP, and 10 TPY of individual HAP.**

Booth #	spray rate (gpm)	max dens (lb/gal)	Coating Product	min/yr	transfer efficiency	filter efficiency	TPY PM uncontrolled	TPY PM controlled
1	0.25	7.76	LACQUER - Satin - T75XXC13600	525600	0.75	80%	127.45	25.49
2	0.026	7.39	SEALER - T65CH0001	525600	0.3	80%	35.34	7.07
3	0.026	7.76	LACQUER - Satin - T75XXC13600	525600	0.3	80%	37.12	7.42
4	0.026	13.05	HERITAGE CHERRY SUNBURST - T65XXN7948	525600	0.3	80%	62.42	12.48
5	0.026	13.05	HERITAGE CHERRY SUNBURST - T65XXN7948	525600	0.3	80%	62.42	12.48
6	0.026	13.05	HERITAGE CHERRY SUNBURST - T65XXN7948	525600	0.3	80%	62.42	12.48
				Note a				77.43
Note a: Generic transfer efficiencies taken from <a href="https://www.pca.state.mn.us/air/paintingcoating-operations-emission-calculations">https://www.pca.state.mn.us/air/paintingcoating-operations-emission-calculations</a>								
Potential to Emit is based on the following formula: (spray maximum gallons/minute)(coating density lb/gal)(525,600 minutes/year)(1 – transfer efficiency)(1 – filter efficiency) /2,000 = Controlled PTE tons per year.								

## V. Existing Air Quality

The existing air quality is designated as attainment/unclassified for all air pollutants.

## VI. Ambient Air Impact Analysis

The Department determined, based on the allowable levels of controlled air emissions, that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

## VII. Taking or Damaging Implication Analysis

As required by 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?
	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.

## 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**  
**Air, Energy & Mining Division**  
**Air Quality Bureau**  
**P.O. Box 200901, Helena, Montana 59620**  
**(406) 444-3490**

**ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Gibson Brands, Inc. – Bozeman Division  
1894 Orville Way  
Bozeman, MT 59715

*Montana Air Quality Permit number (MAQP):* 5257-00

*EA Draft:* 4/30/2021

*EA Final:* 6/03/2021

*Permit Final:* 06/19/2021

1. *Legal Description of Site:* SENE 1/4 of Section 35, Township 1 South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is -111.062877.
2. *Description of Project:* Gibson Brands, Inc. – Bozeman Division (Gibson) is an existing facility that manufactures fine acoustic guitars.
3. *Objectives of Project:* The objective of this project is to bring Gibson into compliance with Montana air quality permitting obligations and to establish enforceable limits so that the facility is not classified as a major source of air emissions.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. Gibson has complied with all the requirements for obtaining an air quality permit. Therefore, the “no-action” alternative was eliminated from further consideration. Other alternatives considered were discussed in the BACT analysis, Section III, in the permit.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #5257-00.
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 are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:* The following comments have been prepared by the Department.

A. *Terrestrial and Aquatic Life and Habitats*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on terrestrial and aquatic life and habitats. MAQP #5257-00 establishes limits on maximum allowable emissions from Gibson utilizing both existing capacity and foreseeable expansion; therefore, any actual increases in air emissions would have no more than minor expected impacts.

B. *Water Quality, Quantity and Distribution*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on water quality, quantity, and distribution. MAQP #5257-00 establishes limits on maximum allowable emissions from Gibson utilizing both existing capacity and foreseeable expansion; therefore, any actual increases in air emissions would have no more than minor expected impacts.

C. *Geology and Soil Quality, Stability and Moisture*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on geology and soil quality, stability, and moisture. Construction activities would occur entirely within the existing facility boundaries and may result in minor temporary impacts.

D. *Vegetation Cover, Quantity, and Quality*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on vegetation cover, quantity, and quality. Construction activities would occur entirely within the existing facility boundaries and may result in minor temporary impacts.

E. *Aesthetics*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on aesthetics. Construction activities would occur entirely within the existing facility boundaries and may result in minor impacts.

F. *Air Quality*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on air quality. MAQP #5257-00 establishes limits on maximum allowable emissions from Gibson accounting for both existing capacity and foreseeable expansion; therefore, any actual increases in air emissions would have no more than minor expected impacts. MAQP #5257-00 would have conditions designed to protect air quality.

**G. Unique Endangered, Fragile, or Limited Environmental Resources**

The current project addresses the operations of an existing facility and accounts for a planned increase in production. Any construction activities would occur entirely within the current boundaries of the facility. Gibson has occupied this location since 1988 and the area is zoned as industrial/commercial. There are no natural habitats in the project area. Any actual increases in air emissions would have no more than minor expected impacts.

**H. Sage Grouse Executive Order**

**General Habitat Area**

The Department recognizes that the site location is not within a Greater Sage Grouse General Habitat Area as defined by Executive Order No. 12-2015.

**I. Demands on Environmental Resource of Water, Air and Energy**

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on demands on environmental resources of water, air, and energy.

**J. Historical and Archaeological Sites**

The current project addresses the operations of an existing facility and accounts for a planned increase in production. Any construction activities would occur entirely within the current boundaries of the facility. Gibson has occupied this location since 1988 and the area is zoned as industrial/commercial. There are no known historical buildings or structures, nor any archaeological sites, in the project area. There are no foreseen impacts to historical or archaeological sites.

**K. Cumulative and Secondary Impacts**

Gibson is anticipating an increase in facility production; however, the activities that occur at the facility would not change. There are no anticipated cumulative or secondary impacts associated with this project.

**8. SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:**  
The following comments have been prepared by the Department.

**A. Social Structures and Mores**

The current project addresses the operations of an existing facility and accounts for a planned increase in production. However, the nature of operations at Gibson would remain the same and is not expected to have any impact on social structures and mores.

**B. Cultural Uniqueness and Diversity**

The current project addresses the operations of an existing facility and accounts for a planned increase in production. However, the nature of operations at Gibson would remain the same and is not expected to have any impact on cultural uniqueness and diversity.

*C. Local and State Tax Base and Tax Revenue*

The current project addresses the operations of an existing facility and accounts for a planned increase in production. Increased revenue may result in minor impacts to the local and state tax base and revenue.

*D. Agricultural or Industrial Production*

The current project addresses the operations of an existing facility and accounts for a planned increase in production. Increased production is not expected to impact agriculture, but a minor impact to industrial production could occur.

*E. Human Health*

The current project addresses the operations of an existing facility and accounts for a planned increase in production which could have a minor impact on human health. MAQP #5257-00 establishes limits on maximum allowable emissions from Gibson accounting for both existing capacity and foreseeable expansion; therefore, any actual increases in air emissions would have no more than minor expected impacts.

*F. Access to and Quality of Recreational and Wilderness Activities*

The current project addresses the operations of an existing facility and accounts for a planned increase in production. However, there is no current access to recreational and wilderness activities at the facility and this is not expected to change because of the project.

*G. Quantity and Distribution of Employment*

The permit application indicates that there may be an additional 10 or more employees hired to accommodate the increase in production. This could have a minor impact on the quantity and distribution of employment.

*H. Distribution of Population*

The permit application indicates that there may be an additional 10 or more employees hired soon, which could represent a minor impact on the distribution of population.

*I. Demands for Government Services*

Government services are required for the review and issuance of the MAQP as well as monitoring ongoing compliance; however, these demands are minor.

*J. Industrial and Commercial Activity*

Gibson intends to increase production soon, which can be accommodated while complying with MAQP #5257-00. There would be no more than minor impacts to local industrial and commercial activity.

*K. Locally Adopted Environmental Plans and Goals*

The Department is not aware of any locally adopted plans or goals that would be affected by the issuance of MAQP #5257-00.

*L. Cumulative and Secondary Impacts*

As an existing facility, the issuance of MAQP #5257-00 would not be expected to have more than minor cumulative or secondary impacts to the local social and economic conditions. Gibson is an existing facility that is seeking an MAQP in order to establish enforceable conditions that would prevent it being designated as a major source of emissions.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action accounts for the current operation and planned production expansion of an acoustic guitar manufacturing facility. MAQP #5257-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program – Montana Sage Grouse Conservation Program

Individuals or groups contributing to this EA: none

EA prepared by: Ed Warner  
Date: April 16, 2021