

July 11, 2024

Greg Jones
Gibson Brands
Bozeman Plant
1894 Orville Way
Bozeman, MT 59715

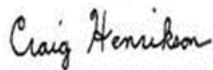
Sent via email: greg.jones@gibson.com; mlarson8201@gmail.com

RE: Final Permit Issuance for MAQP #5257-01

Dear Mr. Jones:

Montana Air Quality Permit (MAQP) #5257-01 is deemed final as of 07/11/2024, by DEQ. This permit is for Gibson Brands, Bozeman, a guitar manufacturing facility. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,



Craig Henrikson
Acting Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-6711



Troy Burrows
Air Quality Scientist
Air Quality Bureau
(406) 444-1452

**Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau**

Montana Air Quality Permit #5257-01

Gibson Brands
Bozeman Montana Manufacturing Facility
1894 Orville Way
Bozeman, MT 59715

July 11, 2024



MONTANA AIR QUALITY PERMIT

Issued To:	MAQP: #5257-01
Gibson Brands, Inc. – Bozeman Division	Application Complete: 05/02/2024
1894 Orville Way	Preliminary Determination Issued: 6/04/2024
Bozeman, MT 59715	Department's Decision Issued: 6/25/2024
	Permit Final: 7/11/2024

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. 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.

B. Current Permit Action

Gibson submitted a Permit Modification Application to add four more spray booths to their Bozeman, MT guitar manufacturing facility. In addition to adding these spray booths, Gibson requested annual hourly permit limits on all of their spray booths to remain a Synthetic Minor facility.

Section II: Conditions and Limitations

A. Emission Limitations

1. Gibson shall limit the operating hours of the spray booths to the limits listed in Table II-1 per calendar year. Each emitting unit is limited to the annual operating hours listed in the table below per calendar year and may not exceed these hours (ARM 17.8.749).

Table II-1

ID Number	Emitting Unit Name	Pollution Control Device	Hours per Year Operation Limits
1	Lacquer – Main Booth	Dry filter	2,880
2	Lacquer Booth	Dry filter	2,880
3	Lacquer/Satin Booth	Dry filter	312
4	Sealer and Washcoat – Touch-up Booth	Dry filter	1,560
5a	Color (CB1)	Dry filter	2,880
5b	Color (CB2)	Dry filter	2,880
6	Vacant	N/A	2,160
7	Antique Booth	Dry filter	1,680
8	Touch-up Booth	Dry filter	1,680
9	Touchup Booth	Dry filter	1,680
10	Touchup Booth	Dry filter	2,880

2. Gibson shall have available spray booth chemical usage information (quantities, densities, and composition) available for all spray booths to allow a determination of the sum of all individual HAP emissions and the total of all HAP emissions. Any calculations used to establish VOC emissions shall be approved by the Montana Department of Environmental Quality (DEQ) and shall be based on the documented VOC density of the coatings, unless otherwise allowed in writing by the DEQ. A record of the operating hours of each spray booth shall be kept by Gibson and maintained on site for 5 years with the accompanying usage information (ARM 17.8.749).
3. 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).
4. 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 DEQ may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Gibson shall supply the DEQ with annual production information for all emission points, as required by the DEQ 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 DEQ by the date required in the emission inventory request. Information shall be in the units required by the DEQ. 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 DEQ 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 operating hours of each spray booth on a calendar year basis.
 - e. 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 DEQ 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 DEQ, 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 DEQ, and must be submitted to the DEQ upon request. These records may be stored at a location other than the plant site upon approval by the DEQ (ARM 17.8.749).
4. By the 25th day of each month, Gibson shall calculate the operating hours by spray booth to ensure the hourly limits in Section II.A.1 are being met for each spray booth (ARM 17.8.749).
5. 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 DEQ’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 DEQ’s decision may request, within 15 days after the DEQ 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 DEQ’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 DEQ’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 DEQ’s decision on the application is final 16 days after the DEQ’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 DEQ 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 #5257-01

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 NE¼ of the SE¼ 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 and annual hourly operating limits.

Table I-1

ID Number	Emitting Unit Name	Pollution Control Device	Hours Per Year Operation Limit
1	Lacquer – Main Booth	Dry filter	2880
2	Lacquer Booth	Dry filter	2880
3	Lacquer/Satin Booth	Dry filter	312
4	Sealer and Washcoat – Touch-up Booth	Dry filter	1560
5a	Color (CB1)	Dry filter	2880
5b	Color (CB2)	Dry filter	2880
7	Antique Booth	Dry filter	2160
8	Touch-up Booth	Dry filter	1680
9	Touchup Booth	Dry filter	1680
10	Touchup Booth	Dry filter	1680

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 and are operated within the annual hourly limits listed.

C. Permit History

On June 21, 2021, DEQ issued Final Montana Air Quality Permit number 5257-00 to Gibson Brands for an acoustic guitar manufacturing facility located at 1894 Orville Way, Bozeman, Montana. The legal description is NE¼ of the SE¼ of Section 35, Township 1

South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is - 111.062877. **MAQP #5257-00** was issued.

D. Current Permit Action

On April 15, 2024, DEQ received an application for a modification of permit 5257-00. The application was deemed complete on May 2, 2024. This modification would add 2 additional lacquer booths and 2 additional touch-up booths to the existing facility and add annual hourly operating limits to all of the spray booths in operation. These hourly limits are included to keep Gibson operating as a Synthetic Minor source. **MAQP #5257-01** replaces MAQP #5257-00.

E. Response to Public Comments (None Received)

Person/Group Commenting	Permit Reference	Comment	DEQ Response

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 DEQ. Upon request, the DEQ will provide references for the 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 DEQ, 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 DEQ.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the DEQ, 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 DEQ upon request.

4. ARM 17.8.110 Malfunctions. (2) The DEQ 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 PM₁₀
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 DEQ. 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 DEQ by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the DEQ. 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 DEQ 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 April 13, 2024, 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 DEQ 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 DEQ 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 DEQ'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 DEQ.
- 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 DEQ may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ 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 #5257-01 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 PM₁₀ 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 DEQ 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 DEQ 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 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 DEQ 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 the requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

Based on these facts, the DEQ determined that Gibson will be a minor source of emissions as defined under Title V based on the requested 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 #5257-01, addressing available methods of controlling particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants (HAP) emissions from coating operations. DEQ reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the DEQ 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.

The PTE calculations for VOC emissions from Gibson's finishing operation were calculated using the worst-case scenario. It assumes 100% of the VOC emissions emitted from the ten booths on a continuous basis at maximum sprayer pressure for a full year. Turbulence flow is achieved with circulation of air within the coating booths (considered collection chambers) then exhausts the ventilated air with entrained overspray via ductwork and emission stacks directly above the spray booths into the atmosphere.

It is noted that the coating booth recirculation system was upgraded when the new facility expansion occurred. Gibson implemented a complete rework of their coating booth operations. Gibson's coating application emission controls currently rely on disposable Bow Tie filters that are mounted in panels in each coating booth. Current operations include 2-3 lacquer booths and seven additional booths for sealing, touch-up, and coloring.

Gibson's BACT determination for emission control technologies is described in a condensed summary below. As indicated in the permit application, total VOC emissions currently meet the 80 ton per year threshold for Synthetic Minor compliance. Gibson plans to voluntarily maintain the proposed synthetic minor category. The synthetic minor category avoids complex permitting and air modeling requirements.

In addition, total and single HAP(s) (*e.g.*, methyl isobutyl ketone) emissions are well below the thresholds of 25 and 10 tons per year, respectively.

BACT options that were considered are described below and include the following:

1. Upgraded filter and sprayer systems:

Filters capture the particulate as the air stream passes through the exhaust significantly decreasing potential emissions. According to a Finishing Products representative, effective panel filters are capable of controlling up to 80-85% of particulates with proper air circulation. Gibson upgraded to more a more efficient filtering system with the new expansion. The amount of coating sprayed and released to the atmosphere is also dependent on the equipment used.

The spray gun, spraying technique, and type of spray booth directly impact the overall effects on the environment and finished product. Gibson currently uses high quality HVLP airless spray guns to enhance their transfer efficiency, which minimizes particulate loss during spraying.

2. Carbon adsorption system:

This technology involves emission flow through a carbon bed that adsorbs VOCs on the activated surface. The highly porous activated carbon provides a large effective surface area. Once the bed has been saturated, the carbon is either removed and replaced or regenerated. The carbon is reclaimed by stripping the carbon in an oxygen deficient environment and separating the VOCs from the carbon. Activated carbon may be granular or pelletized and carbon adsorption system can be manufactured specifically for coating applications and types of VOCs generated. Carbon adsorption systems require higher concentrations of VOCs to be cost effective and technically feasible. Also, complete system modification must occur with respect to specialized blowers, ventilation ductwork, control panels, and other instrumentation. Therefore, carbon adsorption system is not feasible due to substantial installation and operating costs. When used in proper application, carbon adsorption can achieve 99% VOC control (*EPA Air Pollution Control Cost Manual*).

3. Thermal Oxidation:

Thermal oxidation (TO) is recognized as the most effective and cost-efficient way to thermally destroy VOCs from coating operations although it is one of the most expensive. During operation of the TO the VOCs are ducted into regenerators where energy is transferred from ceramic media to the gases in order to elevate the temperature of the gases. After reaching this elevated temperature, the VOCs are directed to a combustion chamber. In the combustion chamber minimal heat is added to ensure a proper oxidation temperature and designed residence time and turbulence are maintained providing destruction of the VOCs at greater than 98% efficiency. The resultant clean, oxidized gases are redirected into the second regenerator bed to continue the energy transfer and oxidation cycle before being released to the atmosphere. Important TO considerations is the infrastructure of the spray booth. In Gibson's case, it is currently not possible to incorporate the 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 USD to over \$500,000 USD, depending on system size, installation location, and the type selected.

4. Modify coating specifications to reduce VOC content:

Lowering VOC content is accomplished by reformulating coating mixtures with lower VOC content. Sherwin Williams currently produces all of Gibson's coatings. Gibson finishing representatives would need to approve any modifications of the current coatings to determine if coating alternatives meet the performance requirements. This process requires extensive performance and feasibility analysis to ensure performance standards and meet customer's expectations. Therefore, BACT evaluation of this alternative involves multiple phases with Gibson's internal finishing experts and is not a favorable option currently due to timing and production goals.

BACT Summary: The BACT review considers the control options that are potentially feasible for Gibson's coating spray booths. The four options discussed above are not currently technically feasible for Gibson's current coating operations. Although, it is noted that Gibson's actual operating hours {242 days at 16 hours per day) are within the Synthetic Minor Permit guideline of 80 tons of VOCs for a 12-month rolling period. The actual estimated VOC emissions are reported each year in the emissions inventory.

The most recent calculation for 2023, indicated {16.983 tons) VOC and total HAPs {19.35 tons) applies to current conditions. Uncontrolled PTE for the facility is estimated at 1504 tons of VOCs per year. Therefore, actual emissions are approximately 5% of the PTE at the Gibson facility.

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
NO_x = oxides of nitrogen
PM = particulate matter

PM₁₀ = particulate matter with an aerodynamic diameter of 10 microns or less
PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 microns or less
SO₂ = sulfur dioxide
TPH = tons per hour
TPY = tons per year
VOC = volatile organic compounds
yr = year

Table IV-1

	Coating VOC Density (lbs/gal)	Total HAPS by wt. (lbs/gal)	Single HAPS by wt. (lbs/gal)	Single HAP (highest percentage)
Gibson Brands Coating Product				
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
ANTIQUÉ - 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 IV-2

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 BOOTH	5.92	0.25	1	525,600	2,000	388.94	0.62	0.04	40.73	2.63
2	LACQUER BOOTH	5.92	0.25	1	525,600	2,000	388.94	0.62	0.04	40.73	2.63
3	LACQUER/SATIN BOOTH	5.92	0.25	1	525,600	2,000	388.94	0.62	0.04	40.73	2.63
4	SEALER and WASH COAT.	6.08	0.026	1	525,600	2,000	41.54	1.02	0.09	6.97	0.61
7	Antique Booth	6.38	0.026	1	525,600	2,000	43.59	1.29	0.10	0.09	6.97
8	TOUCH-UP	5.92	0.026	1	525,600	2,000	40.45	1.02	0.09	6.97	0.61
9	TOUCH-UP	5.92	0.026	1	525,600	2,000	40.45	1.02	0.09	6.97	0.61
10	TOUCH-UP	5.92	0.026	1	525,600	2,000	40.45	1.02	0.09	6.97	0.61
5a and 5b	COLOR BOOTHS (combined)	6.38	0.026	2	525,600	2,000	130.78	1.29	0.10	26.44	2.05
Total		--	--	10	--	--	1504.08	-	-	176.6	19.35

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 TYP VOC, 25 TPY of combined HAP, and 10 TPY of individual HAP.

Table IV-3

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	5.92	Lacquer Booth	172,800	0.75	80%	127.45	6.394
2	0.25	5.92	Lacquer Booth	172,800	0.75	80%	127.45	6.394
3	0.25	5.92	Lacquer/Satin Booth	18,720	0.75	80%	127.45	0.693
4	0.026	6.08	Washcoat/Bond coat Booth	93,600	0.3	80%	35.34	1.04
5A	0.026	6.38	Color Booth	172,800	0.3	80%	35.34	2.01
5B	0.026	6.38	Color Booth	172,800	0.3	80%	35.34	2.01
7	0.026	6.38	Antique Booth	129,600	0.3	80%	35.34	1.50
8	0.026	5.92	Touch-up Booth	100,800	0.3	80%	37.12	1.09
9	0.026	5.92	Touch-up Booth	100,800	0.3	80%	62.42	1.09
10	0.026	5.92	Touch-up Booth	100,800	0.3	80%	62.42	1.09
					Note a		650.33	23.311
Note a: Generic transfer efficiencies taken from https://www.pca.state.mn.us/air/paintingcoating-operations-emission-calculations								
Potential to Emit is based on the following formula:								
$(\text{spray maximum gallons/minute})(\text{coating density lb/gal})(525,600 \text{ minutes/year})(1 - \text{transfer efficiency})(1 - \text{filter efficiency}) / 2,000 = \text{Controlled PTE tons per year.}$								

Gibson – Controlled Potential to Emit (PTE) – Under Normal Operating Conditions
Table IV-4

	Gibson Brands Coating Product	Coating VOC Density (lbs/gal)	Maximum Spray Volume Capacity (gal/min)	Number of sprayers	PTE – Estimated minutes of actual operation/Yr	Filter Efficiency	Transfer Efficiency	Lbs/Ton	Estimated Control PTE (VOC tons/year)
1	Lacquer Booth	5.92	0.25	1	172,800	80%	0.75	2,000	6.394
2	Lacquer Booth	5.92	0.25	1	172,800	80%	0.75	2,000	6.394
3	Satin/Lacquer Booth	5.92	0.25	1	18,720	80%	0.75	2,000	0.693
4	Washcoat/Bo nd coat Booth	6.08	0.026	1	93,600	80%	0.3	2,000	0.367
5a	Color Booth	6.38	0.026	1	172,800	80%	0.3	2,000	0.717
5b	Color Booth	6.38	0.026	1	172,800	80%	0.3	2,000	0.717
7	Antique Booth	6.38	0.026	1	129,600	80%	0.3	2,000	0.537
8	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
9	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
10	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
--	Total	-----	-----	10	-----			-----	16.983

Notes: The facility operates 48 weeks per year with two 8-hour shifts per day and 5 days per week for a total of 3,840 hours or 230,400 minutes.

The PTE – Estimated minutes of operation for each booth in a year is based on a meeting with Gibson representative familiar with all operations and daily conditions (May 3, 2024, personal Communication).

V. Existing Air Quality

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

VI. Ambient Air Impact Analysis

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

VIII. Environmental Assessment

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



FINAL ENVIRONMENTAL ASSESSMENT

Gibson Brands

06/25/2024

Air Quality Bureau

Air, Energy, and Mining Division

Montana Department of Environmental Quality

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Project Overview

COMPANY NAME: Gibson Brands
EA DATE: June 4, 2024
SITE NAME: Gibson Brands, Bozeman, MT
MAQP#: 5257-01
Application Received Date: April 15, 2024 and May 2, 2024

Location

NE¼ of the SE¼ of Section 35, Township 1 South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is -111.062877.

PROPERTY OWNERSHIP: FEDERAL STATE PRIVATE X

Compliance with the Montana Environmental Policy Act

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The proposed action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608. DEQ may not withhold, deny, or impose conditions on the Permit based on the information contained in this EA (§ 75-1- 201(4), MCA).

Proposed Action

Gibson Brands, Inc. has applied for a Montana Air Quality permit modification under the Clean Air Act of Montana to add two additional lacquer booths and two additional touch-up booths to their facility. The state law that regulates air quality permitting in Montana is the Clean Air Act of Montana, §§ 75-2-101, et seq., (CAA) Montana Code Annotated (MCA). DEQ may not approve a proposed project contained in an application for an air quality permit unless the project complies with the requirements set forth in the CAA of Montana and the administrative rules adopted thereunder, ARMs 17.8.101 et. seq. The proposed action would be located on privately owned land, in Bozeman, Gallatin County, Montana. All information included in this EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools.

Purpose and Need

Under MEPA, Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, DEQ must prepare an environmental review. This EA will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in ARM 17.4.608.

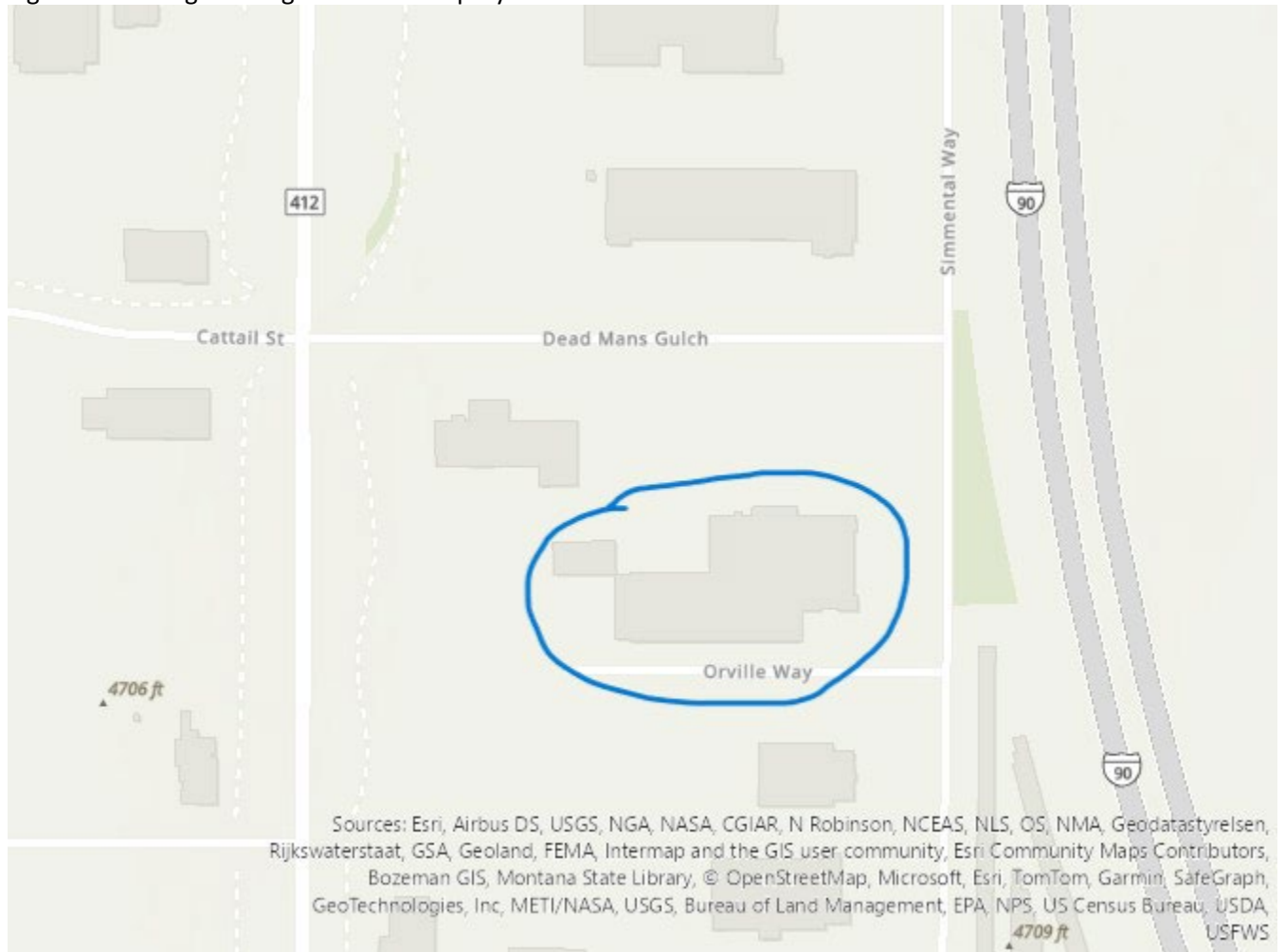
TABLE 1: SUMMARY OF ACTIVITIES PROPOSED IN APPLICATION

Table 1. Summary of Proposed Activities in Application	
General Overview	To add two lacquer booths and two touch-up booths, each with an associated filter for PM and VOC control. Add enforceable conditions for each spray booth limiting the operating hours allowed per calendar year.
Duration and Timing	Construction: Installation of these new spray booths was completed in 2022. Operation: These units each may operate up to the hours listed in Table II-1 of MAQP 5257-01.
Estimated Disturbance	There would be no disturbance to the existing land as the new spray booths have been installed into existing buildings on the existing Gibson Brands site.
Equipment	Four additional spray booths and their associated control filter systems.
Location	The spray booths would be located on the existing Gibson Brands site, inside an existing building which is identified as NE¼ of the SE¼ of Section 35, Township 1 South, Range 5 East, in Gallatin County. The latitude is 45.706685 and longitude is -111.062877.
Personnel on-site	Construction: This has already been completed. Operation: Existing staff would operate the equipment on an as needed basis.
Location and Analysis Area	The analysis area for this permit action is the area shown in Figure 1.
Air Quality	The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to air quality.
Water Quality	This project would not affect water quality. The Applicant would be required to comply with the applicable local, county, state, and federal requirements pertaining to water quality.
Erosion Control and Sediment Transport	This project is on property currently in use for industrial purposes, and it would not contribute to additional erosion or sediment transport. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to erosion control and sediment transport.
Solid Waste	This project would have no effect on solid waste in the area. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to solid waste.

Cultural resources	The property is already in use as industrial property, and there would be no effects on cultural resources. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to cultural resources.
Aesthetics	The property is already in use as industrial property, and there would be no effects on aesthetics. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to aesthetics.
Hazardous Substances	This project does not contribute any new hazardous substances to the facility. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to hazardous substances.
Weed Control	The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to weed control.
Reclamation Plans	The property is already in use as industrial property, so no reclamation is necessary.

Cumulative Impact Considerations	
Past Actions	The most recent air quality permitting action at Gibson Brands was to issue the original Montana Air Quality Permit.
Present Actions	This is the only Montana Air Quality Permit action in the immediate vicinity at the current time.
Related Future Actions	DEQ is unaware of any applications submitted to DEQ in the analysis area and near the Gibson Brands facility.

Figure 1. Existing building in which the spray booths are located.



EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE:

The impact analysis will identify and evaluate whether the impacts are direct or secondary impacts to the physical environment and human population in the area to be affected by the proposed project. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana that could result from the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future impacts must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The activities identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- Construction Impacts (short-term): These are impacts to the environment during the construction period. The construction period of this project is already completed.
- Operation Impacts (long-term): These are impacts to the environment during the operational period. When analyzing duration, please include a specific range of time.

The intensity of the impacts is measured using the following:

- No impact: There would be no change from current conditions.
- Negligible: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- Minor: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- Moderate: The effect would be easily identifiable and would change the function or integrity of the resource.
- Major: The effect would alter the resource.

1. Geology and Soil Quality, Stability, and Moisture

The Applicant has completed this project on property within the boundaries of the existing building on the Gibson Brands property. The location is within the existing building on the property already operated as the Gibson Brands guitar manufacturing facility, in the city of Bozeman, Montana.

Direct Impacts:

The proposed project is in an existing building on land currently used for purposes required for the operation of the Gibson Brands Guitar Manufacturing Facility. It would be considered industrial use property. There are no known direct impacts on the geology and soil.

Secondary Impacts:

There are no predicted secondary impacts associated with this project.

Cumulative Impacts:

Since there are no direct or secondary impacts, there are also no cumulative impacts anticipated from this project.

2. Water Quality, Quantity, and Distribution

This project would not impact any surface or groundwater in the area. The project is proposed in an existing building on property that is already under use for industrial operations, and it would not impact the surrounding property.

Direct Impacts:

There are no direct impacts expected to water quality, quantity, and distribution from this project.

Secondary Impacts:

There are no secondary impacts expected from this project.

Cumulative Impacts:

There are no cumulative impacts expected from this project.

3. Air Quality

Applicants are required to comply with all laws relating to air, such as the Federal Clean Air Act, National Ambient Air Quality Standards set by the Environmental Protection Agency (EPA), and the Clean Air Act of Montana. In addition, the MAQP #5272-01 permit requires that the Applicant limit the operational hours of each spray booth on a calendar year basis.

Direct Impacts:

The air quality impacts would be minor for this project. The majority of pollutants from the proposed project would be particulate material, volatile organic compounds (VOC), and a small amount of Hazardous Air Pollutants (HAPs). This would result in the release of these pollutants in minor amounts.

The emission inventory shown here is for up to the operating hours limits per calendar year for each of the spray booths. Gibson Brands currently operates as a Synthetic Minor permit which means the facility has taken limits to stay below major source status. By accepting annual limits on operating hours per calendar year, keeps Gibson below sitewide limits of 100 tons per calendar year (TPY) of any criteria pollutant, 25 TPY of all combined HAPs, and 10 TPY of any individual HAP, to remain a Synthetic Minor source.

Potential Emission Increases for all the spray booths with the operating hours limited as shown.

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	5.92	Lacquer Booth	172,800	0.75	80%	127.45	6.394
2	0.25	5.92	Lacquer Booth	172,800	0.75	80%	127.45	6.394
3	0.25	5.92	Lacquer/Satin Booth	18,720	0.75	80%	127.45	0.693
4	0.026	6.08	Washcoat/Bond coat Booth	93,600	0.3	80%	35.34	1.04
5A	0.026	6.38	Color Booth	172,800	0.3	80%	35.34	2.01
5B	0.026	6.38	Color Booth	172,800	0.3	80%	35.34	2.01
7	0.026	6.38	Antique Booth	129,600	0.3	80%	35.34	1.50
8	0.026	5.92	Touch-up Booth	100,800	0.3	80%	37.12	1.09
9	0.026	5.92	Touch-up Booth	100,800	0.3	80%	62.42	1.09
10	0.026	5.92	Touch-up Booth	100,800	0.3	80%	62.42	1.09
					Note a		650.33	23.311
Note a: Generic transfer efficiencies taken from https://www.pca.state.mn.us/air/paintingcoating-operations-emission-calculations								
Potential to Emit is based on the following formula:								
$(\text{spray maximum gallons/minute})(\text{coating density lb/gal})(525,600 \text{ minutes/year})(1 - \text{transfer efficiency})(1 - \text{filter efficiency}) / 2,000 = \text{Controlled PTE tons per year.}$								

	Gibson Brands Coating Product	Coating VOC Density (lbs/gal)	Maximum Spray Volume Capacity (gal/min)	Number of sprayers	PTE – Estimated minutes of actual operation/Yr	Filter Efficiency	Transfer Efficiency	Lbs/Ton	Estimated Control PTE (VOC tons/year)
1	Lacquer Booth	5.92	0.25	1	172,800	80%	0.75	2,000	6.394
2	Lacquer Booth	5.92	0.25	1	172,800	80%	0.75	2,000	6.394
3	Satin/Lacquer Booth	5.92	0.25	1	18,720	80%	0.75	2,000	0.693
4	Washcoat/Bond coat Booth	6.08	0.026	1	93,600	80%	0.3	2,000	0.367
5a	Color Booth	6.38	0.026	1	172,800	80%	0.3	2,000	0.717
5b	Color Booth	6.38	0.026	1	172,800	80%	0.3	2,000	0.717
7	Antique Booth	6.38	0.026	1	129,600	80%	0.3	2,000	0.537
8	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
9	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
10	Touch up Booth	5.92	0.026	1	100,800	80%	0.3	2,000	0.388
--	Total	-----	-----	10	-----			-----	16.983

The potential overall change in emissions with the new spray booths has already occurred, and this permit action will not increase those emissions any further.

Secondary Impacts:

There are no additional secondary impacts associated with this project.

Cumulative Impacts:

Cumulative impacts would be negligible based on the limited hours of operation per year for this project.

4. Vegetation Cover, Quantity, and Quality

There are no known rare or sensitive plants or cover types present within the proposed analysis area. No known fragile or unique resources or values, or resources of statewide or societal importance, are present within the proposed analysis area. The property is already in use for industrial purposes. The area where the spray booths are located has been used for previous activities resulting in an area devoid of natural vegetation so these new activities would not disturb native vegetation.

Direct Impacts:

Since the property is already used for industrial purposes, and this project is in an existing building, there would be no additional impacts to vegetation.

Secondary Impacts:

No secondary impacts to vegetation are expected as a result of this project.

Cumulative Impacts:

No cumulative impacts are expected as a result of this project.

5. Terrestrial, Avian, and Aquatic Life and Habitats

The project is proposed in an existing building on property that is currently in use as industrial property. There are no additional impacts to terrestrial, avian, or aquatic life habitats on the property in question.

Direct Impacts:

There are no direct impacts expected from this project on these habitats.

Secondary Impacts:

No secondary impacts to terrestrial, avian and aquatic life and habitats would be expected.

Cumulative Impacts:

There are no cumulative impacts expected from this project.

6. Unique, Endangered, Fragile, or Limited Environmental Resources

There are no unique, endangered, fragile, or limited environmental resources in the area, as this location has been used for industrial purposes previously. The proposed project is not in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: <http://sagegrouse.mt.gov>. Impacts to sage grouse would not be expected.

Direct Impacts:

The Sage Grouse Habitat Conservation Program has stated that the proposed project would not occur in core, general or connectivity sage grouse habitat. Therefore, impacts to sage grouse and other environmental resources would not occur.

Secondary Impacts:

No secondary impacts to unique, endangered, fragile, or limited environmental resources, or to sage grouse or sage grouse habitat would be expected as this site is not in sage grouse habitat.

Cumulative Impacts:

No cumulative impacts to unique, endangered, fragile, or limited environmental resources would be expected.

7. Historical and Archaeological Sites

This project is proposed on land that is currently part of the Gibson Brands operation and is industrial in nature. No additional impacts to history, culture, and archeological uniqueness are expected.

No underground disturbance would be required for the proposed action as the spray booths are located in and existing building on an existing industrial site.

Direct Impacts:

Since this project is in an existing building on an existing industrial site, no direct impacts are expected from this project.

Secondary Impacts:

No secondary impacts to historical and archaeological sites are anticipated.

Cumulative Impacts:

No cumulative impacts to historical and archeological sites would be expected.

8. Aesthetics

The site is located in an area on Gibson Brands property which is industrial in nature, and within an existing building, so no aesthetic impacts are anticipated off the Gibson property.

Direct Impacts:

No direct impacts are expected as a result of this project.

Secondary Impacts:

No secondary impacts to aesthetics are anticipated.

Cumulative Impacts:

No cumulative impacts to aesthetics would be expected from this project.

9. Demands on Environmental Resources of Land, Water, Air, or Energy

There are no expected impacts to the demands on environmental resources of land, water, air, or energy resulting from this project. The Applicant is required to comply with all applicable federal, state, county, and local regulations and ordinances, permits, licenses, and approvals for the operation of the site, and therefore the impacts are limited by the permit requirements listed in MAQP #5257-01.

Direct Impacts:

Based on the analysis of available data and certifications made by the Applicant, and the fact that this project is in an existing building on an existing industrial site, DEQ does not foresee any unusual or excessive demands on land, water, air, or energy from this project. Therefore, limited direct impacts would be anticipated.

Secondary Impacts:

No secondary impacts to demands on environmental resources of land, water, air, or energy would be anticipated.

Cumulative Impacts:

No cumulative impacts to demands on environmental resources of land, water, air, or energy would be expected.

10. Impacts on Other Environmental Resources

The site is currently being utilized on private property for existing industrial purposes. No impacts to other environmental resources are anticipated.

Direct Impacts:

Based on the analysis of available data and on the certifications made by the Applicant, DEQ does not foresee any impacts on other environmental resources from this project. Therefore, no direct impacts are anticipated.

Secondary Impacts:

No secondary impacts to other environmental resources are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to other environmental resources would be expected.

11. Human Health and Safety

The spray booths that are installed must comply with the permit conditions included in MAQP #5257-01, which are protective of human health and safety. Since the spray booths are within the current Gibson Brands property boundary, and located in an existing building, the project would not disturb any offsite properties.

Direct Impacts:

Direct impacts to human health and safety are expected to be negligible for this project. The operating hours of the spray booths would be limited per calendar year.

Secondary Impacts:

No secondary impacts are expected as a result of this project.

Cumulative Impacts:

Negligible cumulative impacts are expected from this project.

12. Industrial, Commercial, and Agricultural Activities and Production

This proposed project area has been in use as industrial property for many years and this project is in an existing building, it is anticipated that there will be no additional impacts to industrial, commercial, and agricultural activities from this project.

Direct Impacts:

There are no anticipated direct impacts to industrial, commercial, or agricultural activities as a result of this project.

Secondary Impacts:

No secondary impacts to industrial, commercial, and agricultural activities and production would be expected.

Cumulative Impacts:

No cumulative impacts are expected as a result of this project.

13. Quantity and Distribution of Employment

Existing employees would likely be utilized for this operation.

Direct Impacts:

No direct impacts are expected to the quantity and distribution of employment due to this project.

Secondary Impacts:

No secondary impacts to quantity and distribution of employment are anticipated as a result this project.

Cumulative Impacts:

No cumulative impacts to the quantity and distribution of employment would be expected.

14. Local and State Tax Base and Tax Revenues

Negligible impact is anticipated to local and state tax base or tax revenues due to the potential increase in production from the Gibson manufacturing facility.

Direct Impacts:

Negligible direct impacts to the tax base or revenues are anticipated as a result of this project.

Secondary Impacts:

No secondary impacts to local and state tax base and tax revenues would be expected.

Cumulative Impacts:

No cumulative impacts to local and state tax base and tax revenues would be expected.

15. Demand for Government Services

The proposed project would add four spray booths and enforceable conditions for all of the existing spray booths, and this equipment would become part of ongoing equipment regulated by entities such as DEQ.

Direct Impacts:

Negligible direct impacts to demand for government services would be expected as a result of regulating the additional equipment associated with this project.

Secondary Impacts:

No secondary impacts to government services are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts are anticipated as a result of this project.

16. Locally-Adopted Environmental Plans and Goals

The proposed operation would occur within Gallatin County, within the City of Bozeman. The project would be required to comply with city and county zoning regulations that may have authority in the area.

DEQ is not aware of any additional policies and plans.

Direct Impacts:

DEQ is not aware of any other locally-adopted environmental plans or goals that would be impacted by this proposed project or in the project area. Impacts from or to locally-adopted environmental plans and goals would not be expected as a result of this project.

Secondary Impacts:

No secondary impacts to locally-adopted environmental plans and goals are anticipated as a result of the proposed work.

Cumulative Impacts:

No cumulative impacts to locally-adopted environmental plans and goals would be expected.

17. Access to and Quality of Recreational and Wilderness Activities

The proposed project would not limit access to wilderness or recreational areas nearby. The proposed activities would occur on private land already in use as an industrial manufacturing facility, within an existing building on the site. This facility is located within the city of Bozeman.

Direct Impacts:

Based on the information provided by the Applicant and DEQ's review of the surrounding area, DEQ does not anticipate that any wilderness or recreational areas would be impacted by the proposed project. Access to wilderness or recreation areas is not an issue at this site.

Secondary Impacts:

No secondary impacts to wilderness or recreational areas are anticipated.

Cumulative Impacts:

No cumulative impacts to access to, and quality of, recreational and wilderness activities would be expected.

18. Density and Distribution of Population and Housing

The proposed project is not expected to add or remove any housing in the area.

Direct Impacts:

It is unlikely this project would add to the population significantly. No direct impacts are anticipated.

Secondary Impacts:

No secondary impacts to density and distribution of population and housing are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to density and distribution of population and housing are anticipated as a result of this project.

19. Social Structures and Mores

DEQ is not aware of any native cultural concerns that would be affected by the proposed activity. Based on the information provided by the Applicant, it is not anticipated that this project would disrupt traditional lifestyles or communities.

Direct Impacts:

No direct impacts to social structures and mores are anticipated as a result of the proposed project.

Secondary Impacts:

No secondary impacts to social structures and mores are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to social structures and mores would be expected.

20. Cultural Uniqueness and Diversity

Based on the information provided by the Applicant, DEQ is not aware of any unique qualities of the area that would be affected by the proposed activity. The site is currently located on land in industrial use.

It is not anticipated that this project would cause a shift in some unique quality of the area.

Direct Impacts:

No impacts to cultural uniqueness and diversity are anticipated from this project.

Secondary Impacts:

No secondary impacts to cultural uniqueness and diversity are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to cultural uniqueness and diversity would be expected.

21. Private Property Impacts

As required by 2-10-105, MCA, the DEQ 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)

The proposed project would take place on private land. DEQ’s approval of MAQP #5257-01 permit would not affect the applicant’s real property. DEQ has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Montana Clean Air Act. Therefore, DEQ’s approval of MAQP #5257-01 would not have private property-taking or damaging implications.

22. Other Appropriate Social and Economic Circumstances

Due to the nature and scope of the proposed project activities, no further direct or secondary impacts would be anticipated from this project.

23. Greenhouse Gas (GHG) Assessment

Issuance of this permit would authorize use of the four additional spray booths previously installed and operated under limited annual hours by Gibson Brands, Inc. It would also add enforceable conditions for the all the spray booths at the site to limit the operating hours on a calendar year basis.

The analysis area for this resource is limited to the activities regulated by the issuance of MAQP #5272-01 permit which is for the operation of four additional spray booths installed in 2022. The spray booths do not emit GHGs and therefore do not contribute any additional GHGs to the Montana inventory.

For the purpose of this analysis, DEQ has defined greenhouse gas emissions as the following gas species: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Other pollutants can have some properties that also are similar to those mentioned above, but the EPA has clearly identified the species above as the primary Greenhouse Gases (GHGs). Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The use of the spray booths at the site would not release GHGs to the atmosphere.

Direct Impacts

Operation of the spray booths will not produce GHGs, and therefore there is no direct impact associated with this project.

Secondary Impacts

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2021). The impacts of climate change throughout the Northern Great Plains of Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2021). However, this project will produce no additional GHGs within Montana.

Cumulative Impacts

Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant (CPRG) program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and this relies upon data already collected by the federal government through various agencies. The inventory specifically deals with carbon dioxide, methane, and nitrous oxide and reports the total as CO₂e. The SIT consists of eleven Excel based modules with pre-populated data that can be used as default settings or in some cases, allows states to input their own data when the state believes their own data provides a higher level of quality and accuracy. Once each of the eleven modules is filled out, the data from each module is exported into a final "synthesis" module which summarizes all of the data into a single file. Within the synthesis file, several worksheets display the output data in a number of formats such as emissions by sector and emissions by type of greenhouse gas.

DEQ has determined the use of the default data provides a reasonable representation of the greenhouse gas inventory for the various sectors of the state, and an estimated annual greenhouse gas inventory by year. The SIT data is currently only updated through the year 2021, as it takes several years to validate and make new data available within revised modules.

Future GHG emissions from operations such as this site would be represented within the following subcategories: Industrial Sector. At present, the Industrial Sector accounts for 4.4 MMTCO₂e in Montana annually. This project will not contribute any metric tons per year of CO₂e or roughly 0.000 percent of the Industrial Sector total. If the project were to last 20 years, the GHGs over the life of the project would still be 0.000 metric tons. Comparison to the statewide GHG total for the project on an annual basis (2021) would be only 0.000 percent.

PROPOSED ACTION ALTERNATIVES

No Action Alternative: In addition to the proposed action, DEQ must also considered a "no action" alternative. The "no action" alternative would deny the approval of MAQP #5257-01. The applicant would lack the authority to conduct the proposed activity. Any potential impacts that would result from the proposed action would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

If the Applicant demonstrates compliance with all applicable rules and regulations required for approval, the "no action" alternative would not be appropriate.

Other Reasonable Alternative(s): No other alternatives were considered.

CONSULTATION

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. External scoping efforts also included queries to the following websites/databases/personnel:

MAQP #5257-00, MAQP #5257-01 Application, EPA State Inventory Tool, and the EPA GHG Calculator Tool.

PUBLIC INVOLVEMENT

The public comment period for this permit action is from 06/4/2024 through 6/19/2024. Public comments may be submitted to the DEQ through the DEQ website, email, written letter, or in person.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION

The proposed project would be located on property owned by Gibson Brands, Inc. All applicable local, state, and federal rules must be adhered to, which, at some level, may also include other state, or federal agency jurisdiction.

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

- The severity, duration, geographic extent, and frequency of the occurrence of the impact;
- The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
- Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
- The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
- The importance to the state and to society of each environmental resource or value that would be affected.
- Any precedent that would be set as a result of an impact of the proposed action that would commit the DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

CONCLUSIONS AND FINDINGS

The DEQ finds that this action results in negligible impacts to air quality and GHG emissions in Gallatin County, Montana.

The severity, duration, geographic extent, and frequency of the occurrence of the impacts associated with the proposed air quality project would be limited. The proposed action would result in no disturbance on the existing industrial property of Gibson Brands, Inc. The Applicant is proposing to add four new spray booths at the site as explained in MAQP #5257-01 to increase the ability to apply coatings in the guitar manufacturing facility. The site would be permitted to operate the spray booths under limited hours per calendar year. The site where the spray booths are located is within the existing property, and within an existing building on the Gibson Brands site.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed actions for any environmental resource. DEQ does not believe that the proposed activities by the Applicant would have any growth-inducing or growth-inhibiting aspects, or contribution to cumulative impacts. The proposed site does not appear to contain known unique or fragile resources.

There are no unique or known endangered fragile resources in the project area. No underground disturbance would be required for this project.

There would be no impacts to view-shed aesthetics as the spray booth operation would be within an existing building already on the site.

Demands on the environmental resources of land, water, air, or energy would not be significant.

Impacts to human health and safety would not be significant.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed activities on any environmental resource.

Issuance of a Montana Air Quality Permit to the Applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the Applicant submits another modification or amendment, DEQ is not committed to issuing those revisions. DEQ would conduct an environmental review for any subsequent permit modifications sought by the Applicant that require environmental review. DEQ would make permitting decisions based on the criteria set forth in the Clean Air Act of Montana.

Issuance of the Permit to the Applicant does not set a precedent for DEQ's review of other applications for Permits, including the level of environmental review. The level of environmental review decision is made based on case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed air quality permitting action by the Applicant would have any growth-inducing or growth-inhibiting impacts that would conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed operation is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of environmental review for MEPA.

PREPARATION AND APPROVAL

EA and Significance Determination Table prepared by:

Troy M Burrows
Air Quality Scientist

Approved by: Craig Henrikson

REFERENCES

- MAQP #5257-00
- MAQP #5257-01 Application received from Gibson Brands, Inc. on April 15, 2024.
- Additional Gibson Brands Email Correspondence received on May 2, 2024.
- EPA GHG Calculator Tool <https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool>. Version dated May 2023 in the Introduction Tab.
- EPA State Inventory Tool, <https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool> Version 2024.1.
- Results of State Inventory Tool model run for Version 2024.1. Model results run by AQB staff on May 7, 2024.
- 2021 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends, <https://www.blm.gov/>