

Statement of Basis
Automotive Coating Operations General Permit
Final

Masters Body Works, Inc.
Lewiston, Idaho
Facility ID No. 069-00068
Permit to Construct P-2013.0021
Project No. 61171

April 16, 2013
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Permit Writer



The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AQCR	Air Quality Control Region
Btu	British thermal units
CAS No.	Chemical Abstracts Service registry number
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
gal/day	gallons per calendar day
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per year
HVLP	high volume, low pressure (applies to paint spray guns)
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/gal	pounds per gallon
lb/hr	pounds per hour
LPG	liquefied petroleum gas
MDI	methylene diisocyanate
MMBtu	million British thermal units
MSDS	Material Safety Data Sheets
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SO ₂	sulfur dioxide
T/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Masters Body Works, Inc. is an auto body repair and refinishing facility with paint spray booth(s). The paint spray booth(s) are pressurized side draft booth(s) with glass fiber filtration media for control of particulate emissions. Drying and paint curing is done in the paint spray booth(s). The process includes application of coatings via high volume, low pressure (HVLP) or equivalent paint spray guns, with at least 65% coating transfer efficiency.

Permitting History

This is the initial permit to construct (PTC) for a new facility, thus there is no permitting history.

Application Scope

This is the initial PTC for a new facility.

Application Chronology

March 22, 2013	DEQ received an application and a \$1,500 application/processing fee.
April 1 – April 16, 2013	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
April 10, 2013	DEQ determined that the application was complete.
April 16, 2013	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

The facility utilizes glass fiber filtration media for control of particulate matter (PM) emissions from the automotive coating operation. In addition, HVLP paint spray guns (or equivalent) are used to minimize volatile organic compound (VOC) and PM (including PM_{2.5} and PM₁₀) emissions from painting. The HVLP (or equivalent) spray equipment will control VOC and PM emissions by having more paint transfer to the desired surfaces than traditional painting equipment.

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION ^(a)

Source Description	Control Equipment Description	Emissions Point ID No. and Description
<u>Paint spray booth(s) and/or preparation station(s):</u> Manufacturer(s): Colmet A-Frame or equivalent ^(a) Model(s): AF 1410-26 or equivalent ^(a) <i>Note: The number of booths installed at the facility is not limited by this permit.</i>	<u>Paint spray booth and/or preparation station filter system(s)</u> Booth Type(s): Side draft Particulate filtration method: Dry Filters Manufacturer(s): Superior Glass or equivalent ^(a) Model(s): PA-18 or equivalent ^(a) PM/PM ₁₀ Efficiency: 98% or greater <u>Coating spray gun(s)</u> Manufacturers & Models: Iwata LPH 400, Graco FX 3000, SATA Jet 90-2, or equivalent ^(a) Type: HVLP or equivalent ^(a) Transfer Efficiency: 65% or greater	Paint booth exhaust stack and/or preparation station exhaust stack

a) "or equivalent" sources have an equivalent or less maximum heat input capacity and fuel consumption than the source listed in this table, and "or equivalent" sources and control equipment shall not result in an emission increase or in the emission of any regulated air pollutant not previously emitted (using the definitions provided in IDAPA 58.01.01.006) when compared to the sources and control equipment listed in this table.

Emission Inventories

Potential to Emit

IDAPA 58.01.01 defines potential to emit (PTE) as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of potential to emit, an emission inventory was developed for the automotive coating operation associated with this proposed project (see Appendix A for detailed potential to emit calculations). Criteria pollutant and HAP PTE were based on the worst-case VOC, PM₁₀, and HAP content in coatings as taken from the DEQ Automotive Coating EI spreadsheet (see the DEQ website).

Uncontrolled Potential to Emit

Similarly, uncontrolled potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The uncontrolled potential to emit is used to determine if a facility is a "synthetic minor" source of emissions. Synthetic minor sources are facilities that have an uncontrolled potential to emit for a criteria pollutant or HAP above an applicable major source threshold without permit limits.

The following table presents the uncontrolled potential to emit for criteria pollutants as determined by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this automotive coating operation, uncontrolled potential to emit is based upon a worst-case for operation of the facility of 2,080 hr/yr (8 hr/day x 260 days/yr) with all coating operations occurring during this time. Since there is prep time (the time spent preparing the automobile for the application of coating) and paint drying time (the time the automobile spends in the booth with the burner operating to facilitate hardening of the coating) associated with applying coatings, this was considered the worst-case time period during which emissions would occur.

Table 2 UNCONTROLLED POTENTIAL TO EMIT CRITERIA POLLUTANTS ^(a)

Emissions Unit	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Paint spray booth(s) and/or preparation station(s)	6.79	0.00	0.00	0.00	19.98	0.0
Total, Point Sources	6.79	0.00	0.00	0.00	19.98	0.00

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

The following table presents the uncontrolled potential to emit for HAP pollutants as determined by DEQ staff. For this automotive coating operation, uncontrolled HAP emissions were calculated by using the DEQ Automotive Coating EI spreadsheet (see the DEQ website) and setting paint use to 4.0 gallons per day (as limited by the permit). Then, the worst-case maximum HAP potential to emit was determined for all paints listed in the spreadsheet. As discussed previously, HAP emissions were assumed to occur when operating the facility 2,080 hr/yr.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAP ^(a)

HAP Pollutants	PTE (T/yr)
Ethyl benzene	0.62
Methyl Isobutyl Ketone (MIBK)	1.26
Naphthalene	2.34
Toluene	1.92
Styrene	2.51
Xylene (o-, m-, p-isomers)	2.36
Total	11.82

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

Post Project Potential to Emit

Post project potential to emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project potential to emit includes all permit limits resulting from this project.

The following table presents the post project potential to emit for criteria pollutants from all emissions units at the facility as determined by DEQ staff. See Appendix A for a detailed presentation of the emission calculations for each emissions unit.

Table 4 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS ^(a)

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Paint spray booths and preparation stations	0.031	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.56	19.98	0	0.0
Post-Project Totals	0.031	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.56	19.98	0.00000	0.00000

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as determined by DEQ staff. The DEQ Automotive Coating EI spreadsheet (see the DEQ website) was used to determine post project potential to emit for HAP pollutants.

Table 5 POST PROJECT POTENTIAL TO EMIT FOR HAP ^(a)

HAP Pollutants	PTE (T/yr)
Ethyl benzene	0.62
Methyl Isobutyl Ketone (MIBK)	1.26
Naphthalene	2.34
Toluene	1.92
Styrene	2.51
Xylene (o-, m-, p-isomers)	2.36
Total	11.82

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

Change in Potential to Emit

The project's change in potential to emit is used to determine if a public comment period may be required or if emissions modeling may be required.

The following table presents the change in the potential to emit for criteria pollutants as a result of this project.

Table 6 CHANGES IN POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS ^(a)

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project PTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
Post Project PTE	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.56	19.98	0.00000	0.0
Changes in PTE	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.56	19.98	0.00000	0.00000

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

Non-Carcinogenic and Carcinogenic TAPs Potential to Emit

Because of the daily coating material use limits imposed by DEQ and agreed to by the facility in applying for this Automotive Coating Operations General Permit, no emission screening levels (EL) specified in IDAPA 58.01.01.585-586 are expected to be exceeded by the facility (see Appendix A).

Ambient Air Quality Impact Analyses

Because of the daily coating material use limits imposed by DEQ and agreed to by the facility in applying for this Automotive Coating Operations General Permit, it was determined whether the PTE for the automotive coating operations exceeded DEQ modeling guideline thresholds. The following table compares the post-project facility-wide annual emissions to the DEQ modeling guideline thresholds (per the State of Idaho Air Quality Modeling Guideline, 12/31/2002).

Table 7 PTE FOR CRITERIA POLLUTANTS COMPARED TO DEQ MODELING GUIDELINE THRESHOLDS ^(a)

Pollutant	PTE (T/yr) or lb/hr if listed	DEQ Modeling Guideline Thresholds (T/yr) or lb/hr if listed	Exceeds Modeling Guideline Threshold?
PM ₁₀	0.14 or 0.03 lb/hr	1 or 0.2 lb/hr	No
SO ₂	0.00	1	No
NO _x	0.00	1	No
CO	0.00	14 lb/hr	No
Lead	0.00000 or 0.000 lb/mo	0.6 or 100 lb/month	No

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

Therefore, the automotive coating operation did not require criteria pollutant modeling.

As presented previously in the DEQ Automotive Coatings EI Spreadsheet (see the DEQ website), there are no TAP which exceeded the pounds per hour screening emission levels (EL) provided in IDAPA 58.01.01.585-586. Therefore, the automotive coating operation did not require TAP modeling.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

Masters Body Works, Inc. is located in Lemhi County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification AIRS/AFS

For AIRS/AFS classification, a facility is classified as “synthetic minor” for a criteria pollutant when the uncontrolled potential to emit a criteria pollutant is above the applicable major source threshold and the potential to emit a criteria pollutant is below the applicable major source threshold. Therefore, the following table compares the uncontrolled potential to emit and the potential to emit for criteria pollutants to the major source thresholds to determine if the facility will be “synthetic minor.”

Table 8 PTE AND UNCONTROLLED PTE FOR CRITERIA POLLUTANTS COMPARED TO MAJOR SOURCE THRESHOLDS ^(a)

Pollutant	Uncontrolled PTE (T/yr)	PTE (T/yr)	Major Source Thresholds (T/yr)	PTE or Uncontrolled PTE Exceeds the Major Source Threshold?
PM ₁₀	6.79	0.14	100	No
SO ₂	0.00	0.00	100	No
NO _x	0.00	0.00	100	No
CO	0.00	0.00	100	No
VOC	19.98	19.98	100	No

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

For AIRS/AFS classification, a facility is classified as “synthetic minor” for HAP pollutants when the uncontrolled PTE a HAP pollutant is above the applicable major source threshold and the PTE a HAP pollutant is below the applicable major source threshold. Therefore, the following table compares the uncontrolled PTE and the PTE for HAP pollutants to the major source thresholds to determine if the facility will be “synthetic minor.”

Table 9 PTE AND UNCONTROLLED PTE FOR HAP COMPARED TO MAJOR SOURCE THRESHOLDS ^(a)

HAP Pollutant	Uncontrolled PTE (T/yr)	PTE (T/yr)	Major Source Thresholds (T/yr)	PTE or Uncontrolled PTE Exceeds the Major Source Threshold?
Ethyl benzene	0.62	0.62	10	No
Methyl Isobutyl Ketone (MIBK)	1.26	1.26	10	No
Naphthalene	2.34	2.34	10	No
Toluene	1.92	1.92	10	No
Styrene	2.51	2.51	10	No
Xylene (o-, m-, p-isomers)	2.36	2.36	10	No
Total	11.82	11.82	25	No

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

As demonstrated in Table 8 the facility has an uncontrolled potential to emit for PM₁₀, SO₂, NO_x, CO, and VOC emissions are less than the major source thresholds of 100 T/yr for each pollutant. As provided in Table 9, the facility has an uncontrolled PTE for each HAP of less than the major source threshold of 10 T/yr, and for all HAP combined of less than the major source threshold of 25 T/yr. Therefore, this facility is not designated as a synthetic minor facility.

Permit to Construct (IDAPA 58.01.01.201)

An application was submitted requesting a permit to construct the proposed facility. Therefore, this permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

An application was submitted for a permit to construct, and an optional Tier II operating permit was not requested. Therefore, the procedures of IDAPA 58.01.01.400-410 were not applicable to this permitting action.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.006.118 defines a Tier I source as “any source located at a major facility as defined in Section 008.” IDAPA 58.01.01.008.10 defines a major facility as either:

- The facility emits or has the potential to emit ten (10) tons per year (T/yr) or more of any hazardous air pollutant, other than radionuclides, or
- The facility emits or has the potential to emit twenty-five (25) T/yr or more of any combination of any hazardous air pollutants, other than radionuclides.

Uncontrolled HAP emissions were calculated by using the DEQ Automotive Coating EI spreadsheet (see the DEQ website) and limiting paint usage to 4.0 gallons per day and bed liner component B usage to 4.0 gallons per day (as required in the permit). Then worst-case HAP emissions were determined for all paints listed in the spreadsheet. Emissions were assumed to occur 365 days per year as a worst-case assumption.

The following table compares the post-project facility-wide annual worst-case uncontrolled emission rate for all HAP emitted by the facility to the HAP major source thresholds in order to determine if the facility is a HAP major source.

Table 10 PTE FOR HAP COMPARED TO MAJOR SOURCE THRESHOLDS ^(a)

HAP Pollutants	PTE (T/yr)	Major Source Threshold (T/yr)	Exceeds the Major Source Threshold?
Ethyl benzene	0.62	10	No
Methyl Isobutyl Ketone (MIBK)	1.26	10	No
Naphthalene	2.34	10	No
Toluene	1.92	10	No
Styrene	2.51	10	No
Xylene (o-, m-, p-isomers)	2.36	10	No
Total	11.82	25	No

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

As presented in the preceding table, the PTE for each HAP is less than 10 T/yr and the PTE for all HAPs combined is less than 25 T/yr. Therefore, this facility is not a HAP major source subject to Tier I permitting requirements.

As discussed previously, Masters Body Works, Inc. is located in Lemhi County (AQCR 63), which is designated as unclassifiable/attainment for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, and Ozone for federal and state criteria air pollutants. Therefore, the following table compares the post-project facility-wide annual PTE for all criteria pollutants emitted by the source to the applicable criteria pollutant major source thresholds in order to determine if the facility is a criteria pollutant major source.

Table 11 PTE FOR CRITERIA POLLUTANTS COMPARED TO MAJOR SOURCE THRESHOLDS ^(a)

Criteria Pollutants	PTE (T/yr)	Major Source Threshold (T/yr)	Exceeds the Major Source Threshold?
PM ₁₀	0.14	100	No
SO ₂	0.00	100	No
NO _x	0.00	100	No
CO	0.00	100	No
VOC	19.98	100	No

a) Emission rates were based on the proposed daily operating schedule and maximum hourly emission rate estimates.

As presented in the preceding table, the PTE for each criteria pollutant is less than 100 T/yr. Therefore, this facility is not a criteria pollutant major source subject to Tier I permitting requirements.

PSD Classification (40 CFR 52.21)

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source, not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore, in accordance with 40 CFR 52.21(a)(2), PSD requirements do not apply.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is potentially applicable to NESHAP requirements in 40 CFR 63, Subpart HHHHHH for surface coating operations at an area source.

40 CFR 63, Subpart HHHHHH National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

40 CFR 63.11169..... What is the purpose of this subpart?

In accordance with §63.11169, subpart HHHHHH establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in auto body refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations.

40 CFR 63.11170..... Am I subject to this subpart?

In accordance with §63.11170(a), this automotive coating operation is subject to this subpart because the facility will be operated as an area source of HAP. The facility is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. In addition, the facility will perform one or more activities listed in this section, including spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations.

40 CFR 63.11171..... How do I know if my source is considered a new source or an existing source?

In accordance with §63.11171(b), the automotive coating operation is the collection of mixing rooms and equipment; spray booths, curing ovens, and associated equipment; spray guns and associated equipment; spray gun cleaning equipment; and equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint. Paint stripping was not proposed as a business activity.

In accordance with §63.11171(c), this automotive coating operation is a new source because it will commence construction after September 17, 2007, by installing new paint stripping or surface coating equipment, and the new surface coating equipment will be used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

40 CFR 63.11172..... When do I have to comply with this subpart?

In accordance with §63.11172(a)(2), because the initial startup of the facility occurred prior to January 9, 2008, the compliance date is January 10, 2011.

40 CFR 63.11173..... What are my general requirements for complying with this subpart?

Because the facility has not proposed paint-stripping activities, the requirements of §63.11173(a) through (f) are not applicable. Because the facility is an automotive coating operation, in accordance with §63.11173(e), the permittee must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.

In accordance with §63.11173(f), each owner or operator of an affected automotive coating operation must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

In accordance with §63.11173(g), as required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

Compliance with these requirements is assured by permit condition 2.13.

40 CFR 63.11174..... What parts of the General Provisions apply to me?

In accordance with §63.11174(a), Table 1 of this subpart shows which parts of the General Provisions in subpart A apply. Compliance with these requirements is assured by permit condition 2.13.

In accordance with §63.11174(b), an owner or operator of an area source subject to this subpart is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71 provided that a permit under 40 CFR 70.3(a) or 71.3(a) is not required for a reason other than becoming area source subject to this subpart. This permitting action is for a permit to construct, and the requirements and procedures of IDAPA 58.01.01.300-399 were not applicable to this project.

40 CFR 63.11175..... What notifications must I submit?

In accordance with §63.11175(a), because the facility is a surface coating operation subject to this subpart, the initial notification required by §63.9(b) must be submitted. For this new operation, the initial notification must be submitted no later than 180 days after initial startup.

In accordance with §63.11175(b), because the facility is a new source, the permittee is not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided the permittee was able to certify compliance on the date of the initial notification, as part of the initial notification, and the permittee's compliance status has not since changed. The permittee must submit a Notification of Compliance Status on or before March 11, 2011. The permittee is required to submit the information specified in paragraphs (b)(1) through (4) of this section with the Notification of Compliance Status.

Compliance with these requirements is assured by permit condition 2.15.

40 CFR 63.11176..... What reports must I submit?

In accordance with §63.11176(a), because the permittee is an owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, the permittee is required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

Compliance with these requirements is assured by permit condition 2.16.

Because the facility has not proposed to conduct paint stripping operations, the MeCl minimization plan requirements are not applicable (see permit condition 2.6).

40 CFR 63.11177..... What records must I keep?

In accordance with §63.11177, because the permittee is the owner or operator of a surface coating operation, the permittee must keep the records specified in paragraphs (a) through (d) and (g) of this section. Because the permittee has not proposed to conduct paint stripping operations, the requirements of paragraphs (e) and (f) of this section are not applicable. Compliance with these requirements is assured by permit condition 2.14.

40 CFR 63.11178..... In what form and for how long must I keep my records?

In accordance with 40 CFR 63.11178(a) because the permittee is the owner or operator of an affected source, the permittee must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two-year period. Compliance with these requirements is assured by permit condition 2.14.

40 CFR 63.11179..... Who implements and enforces this subpart?

In accordance with §63.11179(a), this subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority. At the time of this permitting action, the EPA has not delegated authority to the State of Idaho. However, IDAPA 58.01.01.107.03.i incorporates by reference all Federal Clean Air Act requirements including 40 CFR 63, Subpart HHHHHH. Therefore, the requirements of this subpart have been placed in the permit.

40 CFR 63.11180..... What definitions do I need to know?

Terms used in this subpart are defined in accordance with §63.11180.

Permit Conditions Review

This section describes the permit conditions in this initial permit.

Permit Conditions 2.1 and 2.2 provide a description of the process and the control equipment used at the facility.

Permit Condition 2.3 establishes hourly and annual emission limits for PM₁₀ and VOC emissions from automotive coating operations.

Permit Condition 2.4 establishes a 20% opacity limit for the paint booth stacks, vents, or functionally equivalent openings associated with automotive coating operations.

Permit Condition 2.5 establishes that the permittee shall not allow, suffer, cause, or permit the emission of odorous gasses, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

Permit Condition 2.6 establishes that the facility will not use MeCl to remove paint from vehicles at the facility. This was done because MeCl was not proposed to be used at this facility by the Applicant and the emissions were not included in the DEQ Automotive Coating EI Spreadsheet (see the DEQ website). In addition, Subpart HHHHHH has additional requirements for facilities that use MeCl to remove paint as mentioned previously in the discussion of Subpart HHHHHH in the MACT Applicability Section.

Permit Condition 2.7 establishes a daily use limit for all coating materials used in automotive coating operations. Coating material usage is limited to ensure compliance with PM₁₀ and VOC emissions limits.

Permit Condition 2.8 requires that the permittee conduct all automotive coating operations in a paint spray booth or preparation station with the filters in place, exhaust fan(s) operating, and door(s) or curtain(s) closed, that HVLP spray guns be used, and that exhaust filter system(s) be maintained in accordance with the manufacturer's specifications. This condition also includes booth and preparation station design specifications.

Permit Condition 2.9 requires that the permittee maintain records of all odor complaints received, perform appropriate corrective actions, and maintain records of corrective actions taken at the facility for the automotive coating process. This was required to ensure compliance with the Odor emission limit.

Permit Condition 2.10 requires that the permittee maintain material purchase records and Material Safety Data Sheets (MSDS) for the automotive coating process. This was required to ensure compliance with the Coating Materials Use Limit.

Permit Condition 2.11 requires that the permittee maintain daily usage records of coating materials used in automotive coating operations. This was required to ensure compliance with the Coating Materials Use Limit.

Permit Condition 2.12 establishes that the permittee shall maintain records as required by the General Provision recordkeeping requirements.

Permit Condition 2.13 incorporates general compliance operating requirements from 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit Condition 2.14 incorporates recordkeeping requirements from 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit Condition 2.15 incorporates initial notification requirements from 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit Condition 2.16 incorporates annual notification and reporting requirements from 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit Condition 2.17 specifies that the federal requirements of 40 CFR Part 63 are incorporated by reference into the permit.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there were no comments on the application, and there was not a request for a public comment period on DEQ's proposed action. Refer to the Application Chronology for the public comment opportunity dates.

APPENDIX A – EMISSION INVENTORIES

Coating Operation Emissions Calculations:

A daily coatings material use limit was established for automotive coating operations that demonstrates compliance with State Law. Specifically, compliance with IDAPA 58.01.01.585-586 for toxic air pollutants (TAP) was determined. Therefore, DEQ staff created the DEQ Automotive Coating EI spreadsheet (see the DEQ website). This spreadsheet contains paints from two different manufacturers of paints used in the automotive coating industry and multiple paint systems for each brand. The paint brands chosen were based upon discussions with a national paint distributor with several stores throughout the state of Idaho. The TAP data entered in the spreadsheet was taken from the MSDS for the paints listed. Included in the calculations was a safety factor of 19% since all paints available were not analyzed. With this safety factor it is reasonably presumed that the data represents all available automotive coatings. The spreadsheet was then used to demonstrate that with 4.0 gallons per day of coating use, the EL listed in IDAPA 58.01.01.585-586 would not be exceeded for any of the coatings listed in the spreadsheet. The 4.0 gallons per day of coating was then used to determine worst-case PM₁₀ and VOC emissions from Automotive Coating operations (see the calculations as follows).

Spray booth emissions of methylene diisocyanate (MDI) resulting from the application of the “iso” component coating during bed lining coating operations were estimated using the equation and assumptions from Section 19.0 of the MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry.¹ In this equation it was assumed that 100% of the “iso” component sprayed was MDI ($k_{MDI} = 1.0$), that the combined spray and dry time to apply up to 4 gallons of MDI-based “iso” component was 4 hours or less per day, that “iso” spray coatings were applied 365 days per year, and that “iso” spray coatings were applied at less than 95°F. Although spray booth filtration is required, no additional removal or reduction of MDI emissions was assumed (0% control efficiency).

Uncontrolled emissions are based upon normal operation of the facility of 2,080 hr/yr (8 hr/day x 260 days/yr, normal business hours) with all coating operation occurring during this time. Since there is inherent prep time (the time spent preparing the automobile for the application of coating) and paint drying time (the time the automobile spends in the booth with the burner operating to facilitate hardening of the coating) this was considered the worst-case time period during which emissions could occur.

Therefore, uncontrolled annual PM emissions were calculated using the annual PTE as calculated and backing out the 98% control efficiency of the filter system.

The emission inventory for the facility is summarized in the following spreadsheet.

¹ MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry, Alliance for the Polyurethanes Industry (API), 2004.

General PTC
Automotive Coating
Emission Inventories - maximum emission estimates of all coatings analyzed

Criteria Air Pollutants	Booth Emissions	Heater Emissions	Combined Emissions	Booth Emissions	Heater Emissions	Combined Emissions	Modeling Threshold	Below Threshold?	Modeling Threshold	Below Threshold?
	lb/hr	lb/hr	lb/hr	T/yr	T/yr	T/yr	2002 Guidance		Case-by-Case	
NO ₂	0.000	0.000	0.000	0.00	0.00	0.00	1 T/yr	Yes	7 T/yr	Yes
CO	0.000	0.000	0.000	0.00	0.00	0.00	14 lb/hr	Yes	70 lb/hr	Yes
PM ₁₀	0.031	0.000	0.031	0.14	0.00	0.14	0.2 lb/hr	Yes	0.9 lb/hr	Yes
SO _x	0.000	0.000	0.000	0.00	0.00	0.00	1 T/yr	Yes	7 T/yr	Yes
VOC	4.580	0.000	4.580	19.98	0.00	19.98	0.2 lb/hr	Yes	0.9 lb/hr	Yes
Lead	0.000	0.000	0.000	0.00	0.00	0.00	1 T/yr	Yes	7 T/yr	Yes
	lb/mo	lb/mo	lb/mo				40 T/yr	Yes	7 T/yr	Yes
	0.000	0.000	0.000				0.6 T/yr	Yes		
PM ₁₀ (uncontrolled)	1.560	0.000	1.560	6.79	0.00	6.79	10 lb/mo	Yes		

Hazardous Air Pollutants (HAP) and Toxic Air Pollutants (TAP)						
	Booth Emissions	Heater Emissions	Combined Emissions	Combined Emissions	Modeling Threshold	Below Threshold?
	lb/hr	lb/hr	lb/hr	T/yr	EL (lb/yr)	
Organic HAP PAH						
2-Methylnaphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
3-Methylchloranthrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-06	Yes
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Acenaphthylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Benz(a)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	See POM
Benz(a)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-06	See POM
Benz(b)fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00		See POM
Benz(g,h,i)perylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Benz(k)fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00		See POM
Chrysene	0.00E+00	0.00E+00	0.00E+00	0.00E+00		See POM
Dibenz(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00		See POM
Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
7,12-Dimethylbenz(a)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Fluorene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Indeno(1,2,3-cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00		See POM
Naphthalene	5.34E-01	0.00E+00	5.34E-01	2.34E+00	3.33E+00	Yes
Phenanthrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-05	Yes
Polycyclic Organic Matter (POM, 7-F)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-06	Yes
Organic HAP Non-PAH						
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-04	Yes
Ethyl Benzene	1.40E-01	0.00E+00	1.40E-01	6.14E-01	2.90E+01	Yes
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-04	Yes
Hexamethylene Diisocyanate (HDI)	2.00E-03	0.00E+00	2.00E-03	8.74E-03	2.00E-03	Yes
n-Hexane	4.00E-01	0.00E+00	4.00E-01	1.76E+00	1.20E+01	Yes
Methanol	3.72E-02	0.00E+00	3.72E-02	1.83E-01	1.73E+01	Yes
Methyl Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	Yes
Methyl Ethyl Ketone (MEK)	2.76E-01	0.00E+00	2.76E-01	1.21E+00	3.93E+01	Yes
Methyl Isobutyl Ketone (MIBK)	2.87E-01	0.00E+00	2.87E-01	1.20E+00	1.37E+01	Yes
Methylene Diisocyanate (MDI)	2.83E-03	0.00E+00	2.83E-03	1.24E-02	3.00E-03	Yes
Styrene	5.73E-01	0.00E+00	5.73E-01	2.51E+00	6.67E+00	Yes
Toluene	4.38E-01	0.00E+00	4.38E-01	1.92E+00	2.50E+01	Yes
Xylene	5.38E-01	0.00E+00	5.38E-01	2.36E+00	2.90E+01	Yes
Organic Non-HAP						
Acetone	1.76E+00	0.00E+00	1.76E+00	7.73E+00	1.19E+02	Yes
Butyl Acetate	1.33E+00	0.00E+00	1.33E+00	5.84E+00	4.73E+01	Yes
n-Butyl Alcohol	1.10E+00	0.00E+00	1.10E+00	4.81E+00	1.00E+01	Yes
Carbon Black	1.05E-03	0.00E+00	1.05E-03	4.59E-03	2.30E-01	Yes
Cyclohexane	1.29E-02	0.00E+00	1.29E-02	5.64E-02	7.00E+01	Yes
Diisobutyl Ketone	8.30E-02	0.00E+00	8.30E-02	3.64E-01	9.67E+00	Yes
Ethyl Acetate	2.45E-01	0.00E+00	2.45E-01	1.07E+00	9.33E+01	Yes
Ethyl Alcohol	6.66E-02	0.00E+00	6.66E-02	2.92E-01	1.25E+02	Yes
Heptane	9.30E-02	0.00E+00	9.30E-02	4.07E-01	1.09E+02	Yes
Isobutanol	3.55E-01	0.00E+00	3.55E-01	1.56E+00	1.00E+01	Yes
Isobutyl Acetate	1.10E-02	0.00E+00	1.10E-02	4.82E-02	4.67E+01	Yes
Isophorone Diisocyanate Polymer	2.50E-03	0.00E+00	2.50E-03	1.10E-02	6.00E-03	Yes
Isopropyl Alcohol (IPA)	6.63E-01	0.00E+00	6.63E-01	2.91E+00	6.53E+01	Yes
1-Methoxy-2-Propanol Acetate	3.21E-01	0.00E+00	3.21E-01	1.41E+00	2.40E+01	Yes
Methyl Acetate	3.32E-01	0.00E+00	3.32E-01	1.45E+00	4.07E+01	Yes
Methyl Amyl Ketone	1.53E+00	0.00E+00	1.53E+00	6.70E+00	1.57E+01	Yes
Methyl Isomyl Ketone	7.85E-02	0.00E+00	7.85E-02	3.44E-01	1.80E+01	Yes
Methyl Propyl Ketone	1.58E-01	0.00E+00	1.58E-01	6.90E-01	4.87E+01	Yes
OCDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-10	Yes
Perflane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+02	Yes
Propionic Acid	1.51E-02	0.00E+00	1.51E-02	6.61E-02	2.00E+00	Yes
Stoddard Solvent Mineral Spirits	6.74E-01	0.00E+00	6.74E-01	2.95E+00	3.50E+01	Yes
1,2,4 Trifluorobenzene	1.88E-01	0.00E+00	1.88E-01	8.24E-01	8.20E+00	Yes
VM&P Naphtha	2.45E-01	0.00E+00	2.45E-01	1.07E+00	9.13E+01	Yes
Metal HAP						
Antimony	1.80E-03	0.00E+00	1.80E-03	8.17E-03	3.30E-02	Yes
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-06	Yes
Beryllium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	Yes
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-06	Yes
Chromium III	5.83E-04	0.00E+00	5.83E-04	2.47E-03	3.30E-02	Yes
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-03	Yes
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	Yes
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-02	Yes
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	Yes
Molybdenum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01	Yes
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	Yes
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	Yes
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	Yes
Zinc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	Yes
Metal Non-HAP						
Aluminum	4.88E-01	0.00E+00	4.88E-01	2.04E+00	8.87E-01	Yes
Barium	2.17E-04	0.00E+00	2.17E-04	9.50E-04	3.30E-02	Yes
Inorganic Non-HAP						
Calcium Carbonate	1.30E-03	0.00E+00	1.30E-03	5.70E-03	6.67E-01	Yes
Kaolin	3.93E-03	0.00E+00	3.93E-03	1.72E-02	1.33E-01	Yes
Mica	1.09E-04	0.00E+00	1.09E-04	4.79E-04	2.00E-01	Yes
Silica Amorphous	1.67E-03	0.00E+00	1.67E-03	7.30E-03	6.67E-01	Yes
Silica Gel	1.12E-03	0.00E+00	1.12E-03	4.92E-03	6.67E-01	Yes
Silica Silicon Dioxide	2.56E-03	0.00E+00	2.56E-03	1.12E-02	6.70E-03	Yes
HAP Tot						
			2.698	11.82		
HAP Max						
			0.574	2.52		

Assumptions when estimating spray booth emissions:

- Maximum coating use rates 4.00 gal/day for all coatings (excluding "B" component)
- Averaging period 24 hr/day average
- Annual booth operation 8,760 hr/yr
- Safety factor 1.20 allowance for coatings not analyzed
- Transfer efficiency 85% control for particulates
- Filter removal efficiency 98% control for particulates
- Isocyanate reaction factor 85% control for isocyanates (not applied to MDI)
- Maximum coating density 16.76 lb/gal
- % of monomer in mixture 1% for diisocyanates in hardener mixture
- If no % of TAP was listed in the MSDS, then 1.0% was assumed

Limits

	PM ₁₀	VOC
lb/hr	0.04	4.56
T/yr	0.14	19.98